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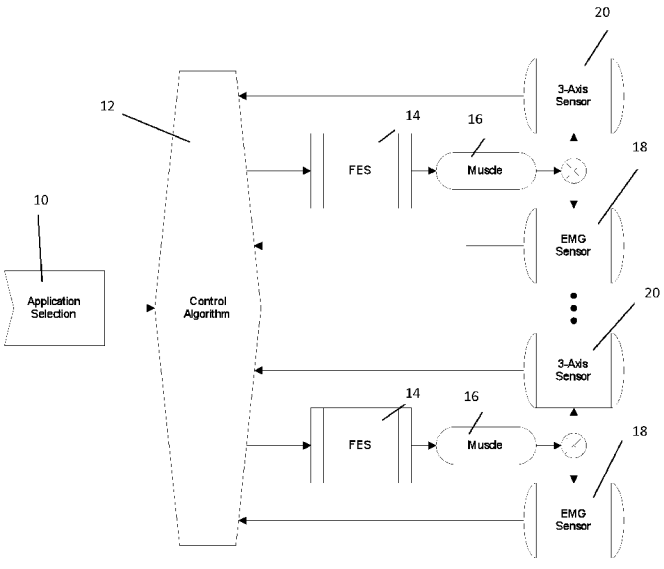


Fig. 1

(57) Abstract: A universal closed-loop functional electrical stimulation system comprising at least one electrode assembly adapted to deliver an electrical stimulation signal to the central nervous system, peripheral nervous system, or muscles of a user, a sensor system adapted to detect a mechanical response to a muscle stimulation signal of at least one muscle associated with a muscle group stimulated through the nervous system or proximate to the electrode assembly. An electrical stimulation device operably coupled to at least one electrode assembly and the sensor system, the electrical stimulation device including a control system to automatically receive feedback from at least one characteristic of the muscle from the detected muscle response and adjust at least one parameter of the muscle stimulation signal in real-time and in response thereto and a programmed microprocessor for controlling said electrical stimulation and receiving input from said sensor system.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - A61N 1/00 (2011.01)
USPC - 607/48
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)
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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)
MicroPatent, Google Patents, Google Scholar

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	WO 2008/062395 A1 (BEN-DAVID) 29 May 2008 (29.05.2008) entire document	1-3, 5-8, 11, 14-19 ---------- 4, 9, 12, 13
Y	US 5,097,833 A (CAMPOS) 24 March 1992 (24.03.1992) entire document	4, 13
Y	US 2009/0306741 A1 (HOGLE et al) 10 December 2009 (10.12.2009) entire document	9, 12
A	US 6,862,480 B2 (COHEN et al) 01 March 2005 (01.03.2005) entire document	1-9, 11-19
A	US 5,002,053 A (GARCIA-RILL et al) 26 March 1991 (26.03.1991) entire document	1-9, 11-19

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