

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 February 2008 (28.02.2008)

PCT

(10) International Publication Number
WO 2008/024137 A3

- (51) International Patent Classification:
A61B 5/05 (2006.01)
- (21) International Application Number:
PCT/US2007/007088
- (22) International Filing Date: 21 March 2007 (21.03.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
11/508,364 23 August 2006 (23.08.2006) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report: 13 November 2008

(54) Title: NOVEL METHOD AND APPARATUS FOR DETERMINING OPTIMAL NEUROMUSCULAR DETECTION SITES, NOVEL DIAGNOSTIC BIOSENSOR ARRAY FORMED IN ACCORDANCE WITH THE SAME, AND NOVEL METHOD FOR TESTING A PATIENT USING THE NOVEL DIAGNOSTIC BIOSENSOR ARRAY

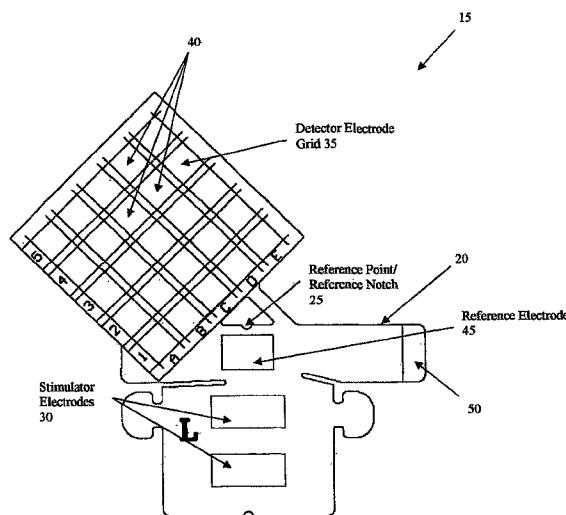


Figure 2: Left hand reference stimulation electrodes and detector electrode grid with fixed geometry

(57) Abstract: This invention relates to the detection of bioelectric signals indicative of neuromuscular function. A mapping biosensor array is first used to identify, relative to reliable anatomical landmarks, the optimal myoelectrical detection site for the majority of the population. Then a diagnostic biosensor array is fabricated using this information so that when the diagnostic biosensor array is positioned on an individual using the reliable anatomical landmarks, the detection electrode is automatically positioned over the optimal detection site.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/07088

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **A61B 5/05(2006.01)**

USPC: 600/547
 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. : 600/547

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 --- Y	US 2005/0101876 A1 (PEARLMAN) 12 May 2005 (12.05.2005), whole document	1-8, 11-21 ----- 9-10, 22-23
A	US 2002/0183605 A1 (DEVLIN et al) 05 December 2002 (05.12.2002), abstract	1-23
A	US 2006/0015028 A1 (FINNERAN et al) 19 January 2006 (19.01.2006), paragraphs 0010-0031	1-23

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

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or 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 documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 18 August 2008 (18.08.2008)	Date of mailing of the international search report 12 SEP 2008
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Max Hindenburg Telephone No. (571)272-3700 

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/07088

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: 24-41
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
PCT 39.1 (iv) methods for treatment of the human or animal body by surgery or therapy, as well as diagnostic methods.

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
 2. As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of any additional fees.
 3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

 4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
- Remark on Protest**
- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
 - The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
 - No protest accompanied the payment of additional search fees.