

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 December 2008 (11.12.2008)

PCT

(10) International Publication Number
WO 2008/149289 A3

- (51) International Patent Classification:
A61N 1/05 (2006.01)
- (21) International Application Number:
PCT/IB2008/052163
- (22) International Filing Date: 3 June 2008 (03.06.2008)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/941,740 4 June 2007 (04.06.2007) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, 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, ME, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: INSERTION SYSTEM AND LEAD FOR TREATMENT OF A TARGET TISSUE REGION

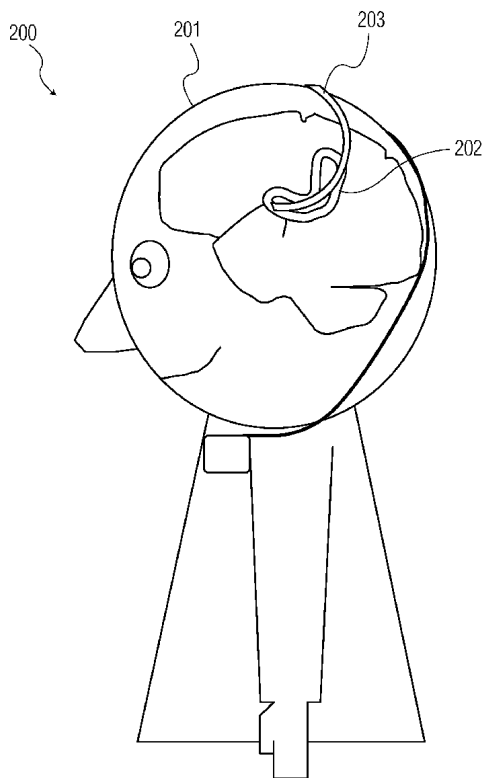


FIG. 2

(57) Abstract: The present disclosure provides for systems and methods enabling the insertion of leads (as used e.g., in a framework of the brain treatment therapies) through a target anatomy for conforming with a target tissue region. An exemplary lead includes at least a partially curved portion for conforming with a geometry defined by the target tissue region. In an exemplary embodiment, the system relates to stimulating targets in the brain for improved post-operative steering of an applied electric field. The leads can be either pre-curved or put under transversal mechanical strain during insertion such that a certain curved curvature of the insertion trajectory is achieved. The system includes at least a first insertion tool removably engaged with respect to the lead for guiding and providing mechanical support to the lead during insertion.



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Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

Published:

- *with international search report*

(88) Date of publication of the international search report:

29 January 2009

A. CLASSIFICATION OF SUBJECT MATTER
 INV. A61N1/05

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)
 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* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|--|
| X | US 5 902 236 A (IVERSEN ALFRED ABNER [US]) 11 May 1999 (1999-05-11) columns 3-7 figures 12-18 abstract | 1-14, 23-26 |
| X | US 5 925 073 A (CHASTAIN STUART R [US] ET AL) 20 July 1999 (1999-07-20) columns 2-3 figures 1-7 abstract | 1-5, 13-16, 24, 27, 28, 34-38 |

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

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- *&* document member of the same patent family

Date of the actual completion of the international search

1 October 2008

Date of mailing of the international search report

26/11/2008

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|--------------------------------------|
| X | <p>US 2006/074472 A1 (FLACH ERHARD [DE] ET AL) 6 April 2006 (2006-04-06)</p> <p>paragraphs [0012], [0039] - [0042], [0054] - [0056] figures 1-3 abstract</p> <p style="text-align: center;">-----</p> | <p>1-5, 13-24, 27-36</p> |
| X | <p>US 2005/137646 A1 (WALLACE MICHAEL P [US] ET AL) 23 June 2005 (2005-06-23)</p> <p>paragraphs [0003], [0089], [0090], [0098], [0147] - [0152] figures 46, 49A-49C abstract</p> <p style="text-align: center;">-----</p> | <p>1-14, 24-26, 32, 36</p> |
| A | <p>US 2006/149335 A1 (MEADOWS PAUL M [US]) 6 July 2006 (2006-07-06) cited in the application paragraphs [0001], [0022] - [0029], [0042] figures 5A-B, 6A-C abstract</p> <p style="text-align: center;">-----</p> | <p>10-12</p> |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2008/052163**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.: 39
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT – Method for treatment of the human or animal body by surgery
2. Claims Nos.:
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:
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 allsearchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of 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.

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
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