

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
18 October 2001 (18.10.2001)

PCT

(10) International Publication Number  
**WO 01/76498 A3**

(51) International Patent Classification<sup>7</sup>: **A61B 19/00**,  
A61M 1/00, A61B 17/34

(21) International Application Number: PCT/US01/11178

(22) International Filing Date: 6 April 2001 (06.04.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/195,663 7 April 2000 (07.04.2000) US

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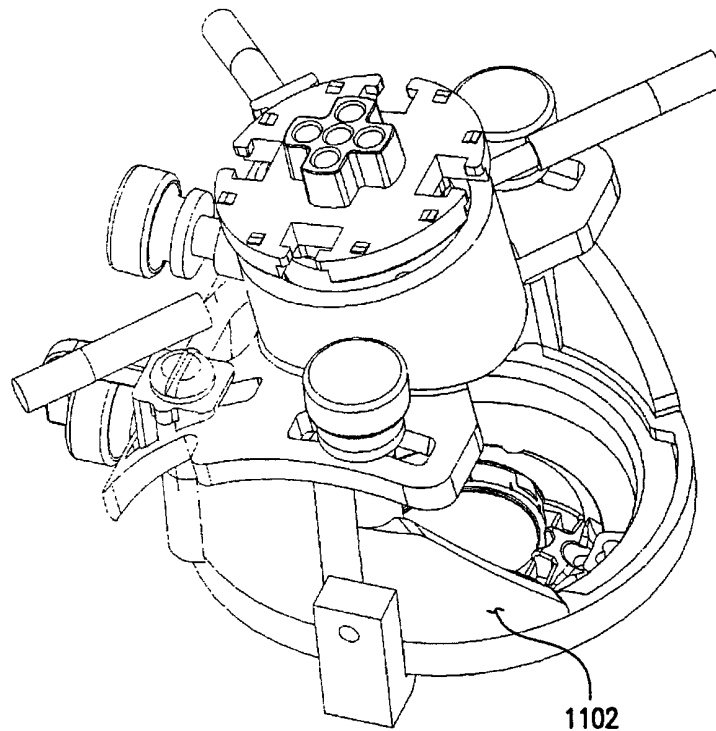
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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

[Continued on next page]

(54) Title: DEEP ORGAN ACCESS DEVICE AND METHOD



(57) Abstract: Devices and methods provide accurate targeting, placement, and/or stabilization of an electrode or other instrument(s) into the brain or other body organ, such as to treat severe tremor or other neurological disorders. Targeting is performed using any form of image-guidance, including real-time MRI, CT, or frameless surgical navigation systems.



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CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

**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

**(84) Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

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

18 April 2002

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

**INTERNATIONAL SEARCH REPORT**

International Application No <b>PCT/US 01/11178</b>
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**A. CLASSIFICATION OF SUBJECT MATTER**  
**IPC 7 A61B19/00 A61M1/00 A61B17/34**

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)  
**IPC 7 A61B**

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**

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 457 922 A (RAY CHARLES D) 29 July 1969 (1969-07-29)	46-55
Y	column 2, line 69 - column 3, line 25; figures 1-3,8,11,12	56-64
X	DE 198 08 220 A (DAUM GMBH) 2 September 1999 (1999-09-02) claims 1,2; figures 1,2	46-48
X	column 2, line 18 - line 34; figure 3	68-70
Y		71,72
X	column 1, line 33 - line 47	76
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Further documents are listed in the continuation of box C.       Patent family members are listed in 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 document but 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 <b>4 February 2002</b>	Date of mailing of the international search report <b>13.02.02</b>
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer <b>Moers, R</b>
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International Application No

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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	EP 0 832 611 A (ALLEN GEORGE S) 1 April 1998 (1998-04-01) column 10, line 7 - line 22; figure 5	46-51, 62,63
X	column 10, line 40 - line 43; figures 12,15	73
Y		74,75
X	figures 5,7,10,12	81-83
X	GB 2 329 473 A (BRUKER MEDIZINTECH) 24 March 1999 (1999-03-24) page 14, paragraph 3 -page 15, paragraph 2; figures 2,3	46-49
A	US 4 998 938 A (GHADJAR FATHALI G ET AL) 12 March 1991 (1991-03-12) abstract; figure 1	46
A	US 5 810 712 A (DUNN MARY ELIZABETH) 22 September 1998 (1998-09-22) abstract; figure 1	52
A	US 4 809 694 A (FERRARA VINCENT L) 7 March 1989 (1989-03-07) column 3, line 56 -column 4, line 4; figure 4	53
X	abstract; figure 4	76,80
Y		78,79
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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.
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Y	US 5 464 446 A (ADAMS PAUL ET AL) 7 November 1995 (1995-11-07) abstract; figures 1,5 ----	78,79
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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.
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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 01/11178

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 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.: 1-45  
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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

see additional sheet

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 an additional fee, this Authority did not invite payment of any additional fee.
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.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 46-55

Access device having a mounting unit and a guide assembly attached to the unit by at least one joint including an arcuate sliding joint.

2. Claims: 46 and 56-59

Access device having a mounting unit, a guide assembly attached to the unit by at least one joint including a reference device

3. Claims: 46, 60 and 61

Access device having a mounting unit, a guide assembly attached to the unit by at least one joint, the guide having two insertion axes

4. Claims: 46 and 62-64

Access device having a mounting unit, a guide assembly attached to the unit by at least one joint including a secondary guide device

5. Claims: 65-67

Access device having a mounting unit, a guide assembly attached to the unit by at least one joint and an alignment device

6. Claims: 68-72

Access device having a mounting unit, a guide assembly attached to the unit by at least one joint and at least one sheath

7. Claims: 73-75

Access device having a mounting unit, a guide assembly attached to the unit by at least one joint and a device introducer

8. Claims: 76-80

Access device having a mounting unit, a guide assembly



FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

attached to the unit by at least one joint and a fixing device

9. Claims: 81-83

Access device having a mounting unit, a guide assembly attached to the unit by at least one joint comprising a further number of joints

10. Claims: 84-89

A device retention system having a base, and a fixing device for fixing a primary device

11. Claim : 90

An immobilizing device having a base and a stabilizer including a movable cam

12. Claim : 91

An immobilizing device having a base, a resilient lower plate stabilizer and an upper plate

13. Claim : 92

An immobilizing device having a base, a resilient detachable C-shaped stabilizer and a separate spreader

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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