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Published:

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[Continued on next page]

(54) Title: MIDDLE EAR IMPLANT

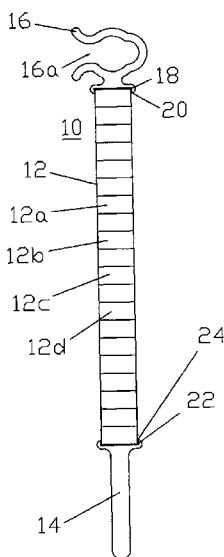


Fig.1

(57) Abstract: A hearing actuator (10) for implantation in the middle ear of a user. The actuator comprises transducer means (for example a piezoelectric device) (12) for converting electrical input signals into mechanical vibrations, and attachment means (16) for attaching one end of the transducer means to a first part of the middle ear. The actuator also comprises contacting means (14) which extends from an opposite end of the transducer means such that a longitudinal axis of the contacting means is substantially parallel to a longitudinal axis of the transducer means. The contacting means is for contacting a second part of the middle ear (to which it may be attached), so as to transmit the mechanical vibrations of the transducer means thereto.

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INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2008/050344A. 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)
H04R A61F 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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 707 338 A (ADAMS THEODORE P [US] ET AL) 13 January 1998 (1998-01-13) column 1, line 22, paragraph 67; figures 3,4A,5 column 8, line 33, paragraph 42; figure 10	1,2,4-6, 9,10, 12-14, 27,34-36
Y		3,7,8, 11,15-17
Y	WO 99/63785 A (ST CROIX MEDICAL INC [US]) 9 December 1999 (1999-12-09) page 14, lines 1-7; figures 3-5	3,11,17
Y	US 6 629 922 B1 (PURIA SUNIL [US] ET AL) 7 October 2003 (2003-10-07) cited in the application column 4, line 56 - line 67	7,8
	-/--	

 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
- *E* earlier document but published on or after the international filing date
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- *O* document referring to an oral disclosure, use, exhibition or other means
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- *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
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- * & * document member of the same patent family

Date of the actual completion of the international search

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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.
Y	US 6 537 199 B1 (MUELLER GERD M [DE] ET AL) 25 March 2003 (2003-03-25) abstract; figures	15, 16
A	WO 2006/075169 A (SENTIENT MEDICAL LTD [GB]; ABEL ERIC WILLIAM [GB]; WANG ZHIGANG [GB]) 20 July 2006 (2006-07-20) abstract; figures	1, 27, 34-36

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2008/050344

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.: 37-43
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:
see FURTHER INFORMATION sheet PCT/ISA/210
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.

INTERNATIONAL SEARCH REPORT

International Application No. PCT/GB2008/050344

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Claims Nos.: 37-43

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2)PCT declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/GB2008/050344

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5707338	A	13-01-1998 NONE	
WO 9963785	A	09-12-1999 EP 1308068 A2	07-05-2003
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