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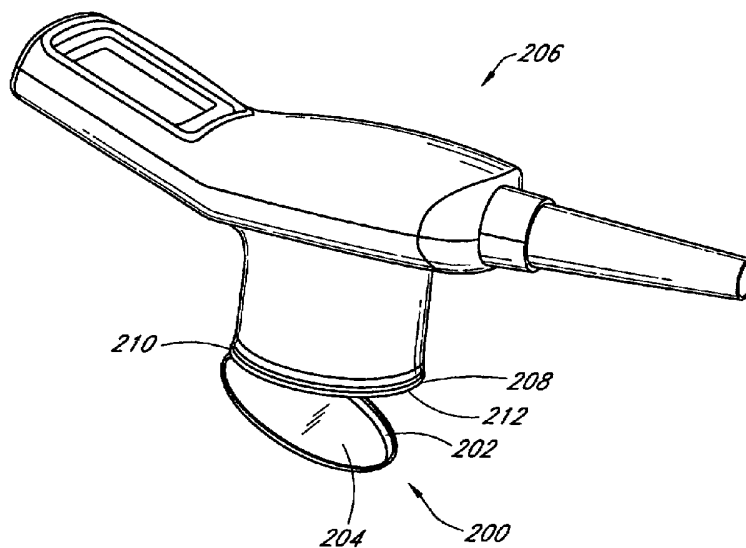
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60/537,034 20 January 2004 (20.01.2004) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, 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, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
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(54) Title: INTERFACE FOR USE BETWEEN MEDICAL INSTRUMENTATION AND A PATIENT



(57) Abstract: Disclosed herein are methods, devices, compositions, and systems for providing an interface between medical instrumentation and a patient. In various embodiments, the interface provides a sterile barrier, acoustic coupler, and thermal insulator between the patient and a medical instrument. In some embodiments, an acoustic coupler interface is used between an ultrasound instrument and a patient. In some embodiments, the acoustic coupler comprises a thermoplastic elastomer ("TPE") and in particular oil-enhanced or gelatinous TPEs that can be used in diagnostic and therapeutic (HIFU) ultrasound procedures.

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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, MC, 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).

— *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:
6 October 2005

Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

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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.
PCT/US2005/001893

Box 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.: **53-54**
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 therapy
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 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:

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.:
1-18, 36-38, 41, 42, 44-52, 68-77

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: 1-18,36-38,41,42,44-52,68-77

Ultrasound pad comprising a gelatinous thermoplastic elastomer mass and method

2. claims: 19-23

Ultrasound pad comprising first and second gelatinous solid masses

3. claims: 24-35,39,40,43,55-67

Flexible sheath to prevent passage of microbes and method

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2005/001893

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61B8/00

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 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.
P,X	WO 2004/064598 A (SALUTRON, INC; LO, THOMAS, YING-CHING; ESCORCIO, TOLENTINO; CHANG, RON) 5 August 2004 (2004-08-05) paragraph [0050]	1-5, 7-12, 14, 41, 42, 44-51, 68-77
X	----- EP 0 239 999 A (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD) 7 October 1987 (1987-10-07) page 2, line 44 - line 47 page 3, line 45 - line 56 page 5, line 46 - line 54 -----	1-5, 10, 12, 14, 41, 42, 44, 46, 49-51, 68-77
A	----- -/--	6

 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

"E" earlier document but published on or after the international filing date

"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)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"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

"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

"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.

"&" document member of the same patent family

Date of the actual completion of the international search

4 May 2005

Date of mailing of the international search report

04 AUG 2005

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INTERNATIONAL SEARCH REPORT

International Application No
PC 52005/001893

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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A	column 4, line 13 - line 32 column 6, line 55 - line 60 column 10, line 13 - line 23 -----	15,16,36
X	US 2003/195420 A1 (MENDLEIN JOHN D ET AL) 16 October 2003 (2003-10-16)	1-6, 8-10, 12-15, 17,36, 41,42, 44-51, 68-77
A	paragraphs [0129], [134152], [0155], [0162], [0188] -----	16,37,38
A	US 5 655 539 A (WANG ET AL) 12 August 1997 (1997-08-12) column 11, line 6 - line 8 -----	1,14,17, 36,41, 42,44,52

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PC 2005/001893

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