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(71) Applicant: NEUWAVE MEDICAL, INC. [US/US]; 3529 Anderson Street, Madison, Wisconsin 53704 (US).

(72) Inventors: JOHNSON, Scott; 3529 Anderson Street, Madison, Wisconsin 53704 (US). MORAN, Patrick; 3529 Anderson Street, Madison, Wisconsin 53704 (US). ANDERSON, David; 3529 Anderson Street, Madison, Wisconsin 53704 (US). SCHEFFELKER, Richard W.; 3529 Anderson Street, Madison, Wisconsin 53704 (US).

BRACE, Christopher L.; 3529 Anderson Street, Madison, Wisconsin 53704 (US).

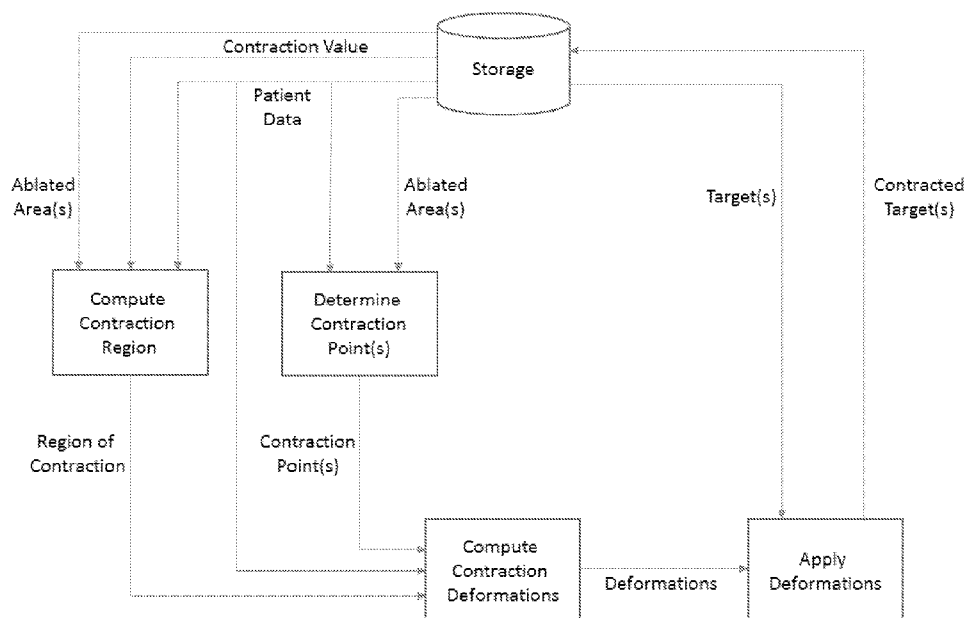
(74) Agent: SHIRTZ, Joseph F. et al.; Johnson & Johnson, One Johnson & Johnson Plaza, New Brunswick, New Jersey 08933 (US).

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(54) Title: SYSTEMS FOR ENERGY DELIVERY

FIG. 1



(57) Abstract: The present invention relates to comprehensive systems and methods for delivering energy to tissue for a wide variety of applications, including medical procedures (e.g., tissue ablation, resection, cautery, vascular thrombosis, treatment of cardiac arrhythmias and dysrhythmias, electrosurgery, tissue harvest, etc.). In certain embodiments, systems and methods are provided for identifying and treating a target tissue region adjusting for ablation-related anatomical changes (e.g., tissue contraction).



TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

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))*

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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23 November 2017 (23.11.2017)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2017/027424

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.: 9-12
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 all searchable 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/US2017/027424

A. CLASSIFICATION OF SUBJECT MATTER INV. A61B18/18 A61B18/14 ADD.		
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) A61B A61N G06T		
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) 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 2009/196480 A1 (NIELDS MORGAN [US] ET AL) 6 August 2009 (2009-08-06) paragraphs [0038], [0046], [0048], [0052], [0055], [0188], [0196], [0245], [0248] - [0250]	1,3-6
X	US 2013/259335 A1 (MALLYA YOGISH [IN] ET AL) 3 October 2013 (2013-10-03) paragraphs [0020], [0021], [0048]; claim 11; figures 1,3	1-3,6-8
X	US 2007/230757 A1 (TRACHTENBERG JOHN [CA] ET AL) 4 October 2007 (2007-10-04) paragraphs [0032] - [0033], [0109] - [0110]	1,3-6
X	US 2009/281536 A1 (BECKMAN HUGH [US] ET AL) 12 November 2009 (2009-11-12) paragraphs [0031], [0035]	1,3-6
☐ 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 application or patent 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 29 September 2017		Date of mailing of the international search report 09/10/2017
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Link, Tatiana

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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