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Declarations under Rule 4.17:

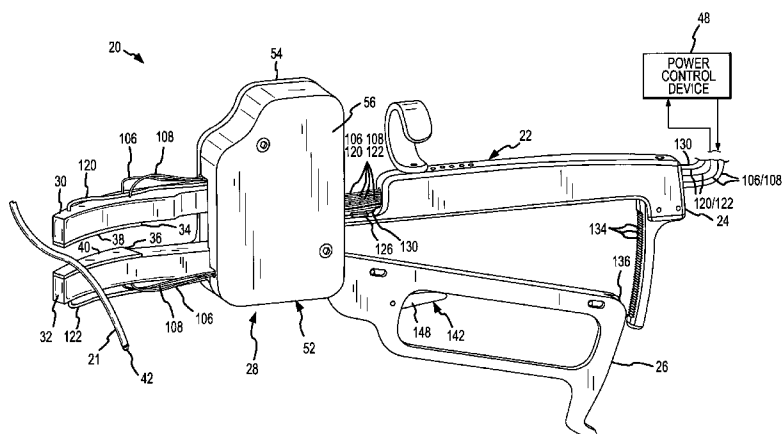
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(u))
- of inventorship (Rule 4.17(v))

Published:

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25 September 2008

(54) Title: APPARATUS FOR RAPID RELIABLE ELECTROTHERMAL TISSUE FUSION AND SIMULTANEOUS CUTTING



(57) **Abstract:** Pieces of tissue are fused together and simultaneously cut by compressing the pieces together at an interface, delivering an impulse of electrical power which is converted into sufficient thermal energy to fuse the pieces together at the interface and simultaneously cut the fused tissue pieces along a well-defined linear path. The impulse, and the fusion and the simultaneous cutting, occur within a preferable time of 1.5-2.0 seconds but no greater than 4.0 seconds. The temperature of the thermal energy is regulated between 220°C-320°C. The force applied on the tissue pieces is sufficient to fuse the tissue at the interface followed by further compression to cut the fused tissue along the linear path as a result of the thermal energy and a zero distance gap between jaws which compress the tissue pieces. The jaws have smooth working surfaces with an Ra of 0.15 or less microns up to 0.40 microns.

WO 2008/094564 A3

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2008/001180

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61B18/14

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

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 5 891, 142 A (EG6ERS PHILIP E [US] ET AL) 6 April 1999 (1999-04-06)	1-23, 28-31
Y	column 5, line 65 - column 9, line 58; claim 1; figures 1-3	24-26
Y	US 2003/199870 A1 (TRUCKAI CSABA [US] ET AL) 23 October 2003 (2003-10-23) paragraphs [0051] - [0058]; claim 1	24-26
A	US 2003/216733 A1 (MCCLURKEN MICHAEL E [US] ET AL MCCLURKEN MICHAEL E [US] ET AL) 20 November 2003 (2003-11-20) paragraphs [0075] - [0090]	1-31
A	US 2002/091383 A1 (HOOVEN MICHAEL D [US]) 11 July 2002 (2002-07-11) the whole document	1-31



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

'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

30 June 2008

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INTERNATIONAL SEARCH REPORT

International application No.
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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.: **32-52**
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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/001180

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