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(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 13/107,720 (CIP)
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*[Continued on next page]*

(54) Title: METHODS AND DEVICES FOR EXCISION OF TISSUE

(57) Abstract: Various apparatus and methods for excising tissue are described therein. In certain variations, a method of excising a target tissue mass from a subject, may include advancing an elongate instrument having an opening at its distal end into a subject. A cutting element, e.g., a snare or loop, may be advanced from the distal end of the elongate instrument, wherein the cutting element may be configured to cut tissue. The cutting element may be positioned near the target tissue mass. The cutting element may be actuated, e.g., expanded or deployed, and may perform energy based or mechanical cutting of a section of tissue encapsulating the target tissue mass. The cut section of tissue and the target tissue mass encapsulated therein may be removed from the subject.

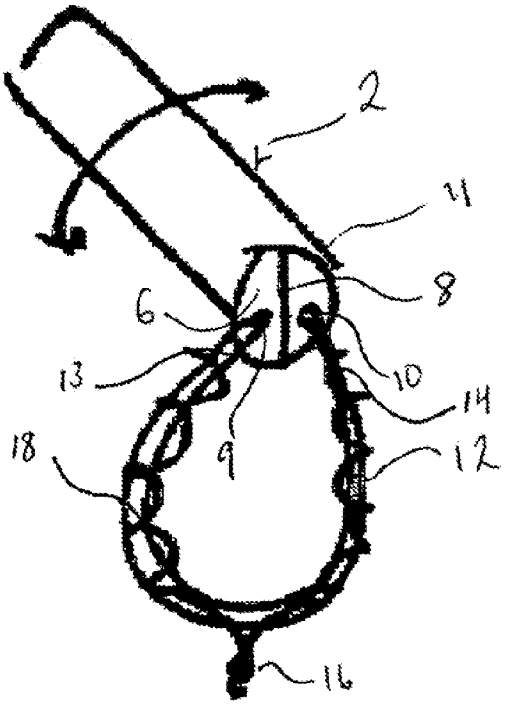


Figure 1A

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OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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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(ii))*

**Published**:

— *with international search report (Art. 21(3))*

**(88) Date of publication of the international search report**:
8 May 2014

**(15) Information about Correction**:

**Previous Correction**:
see Notice of 20 June 2013

# INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/037614

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - A61B 10/02 (2012.01)
USPC - 600/562
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(8) - A61B 5/00,10/02; B29L 31/40; B65D 81/00; C12Q 1/00 (2012.01)
USPC - 206/223, 569; 435/4, 6.1, 6.14; 600/300, 562

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)
PatBase, Google Patent, Proquest

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| X<br>---<br>Y | US 5,318,564 A (EGGERS) 07 June 1994 (07.06.1994) entire document | 1, 2<br>---<br>3, 12-25 |
| Y | US 5,047,026 A (RYDELL) 10 September 1991 (10.09.1991) entire document | 3 |
| Y | US 6,852,111 B1 (LIEBER) 08 February 2005 (08.02.2005) entire document | 12-25 |
| Y | US 2009/0054805 A1 (BOYLE JR) 26 February 2009 (26.02.2009) entire document | 20, 21, 23, 24 |

☐ Further documents are listed in the continuation of Box C. ☐

* 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 | Date of mailing of the international search report |
|---|---|
| 09 August 2012 | 24 AUG 2012 |
| Name and mailing address of the ISA/US<br>Mail Stop PCT, Attn: ISA/US, Commissioner for Patents<br>P.O. Box 1450, Alexandria, Virginia 22313-1450<br>Facsimile No. 571-273-3201 | Authorized officer:<br>Blaine R. Copenheaver<br>PCT Helpdesk: 571-272-4300<br>PCT OSP: 571-272-7774 |

Form PCT/ISA/210 (second sheet) (July 2009)

# INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/037614

**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.:
because they relate to subject matter not required to be searched by this Authority, namely:

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.: 4-11
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 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.