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(71) Applicant (for all designated States except US): **VI-BRYNT, INC.** [US/US]; 701 Galveston Drive, Redwood City, CA 94063 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **NEWELL, Matthew, B.** [US/US]; 950 La Mesa Dr., Portola Valley, CA 94028 (US). **RATHI, Pankaj** [IN/US]; 716 Astor Ct., Mountain View, CA 94043 (US). **GEORGE, Robert, M.** [US/US]; 15123 Chelsea Dr., San Jose, CA 95124 (US). **BROOKS, Narvel, M.** [US/US]; 488 University Ave. #207, Palo Alto, CA 94301 (US). **UEMURA, Shuji** [JP/US]; 155 Lombard Street #206, San Francisco, CA 94111 (US). **BENDER, Theodore, M.**

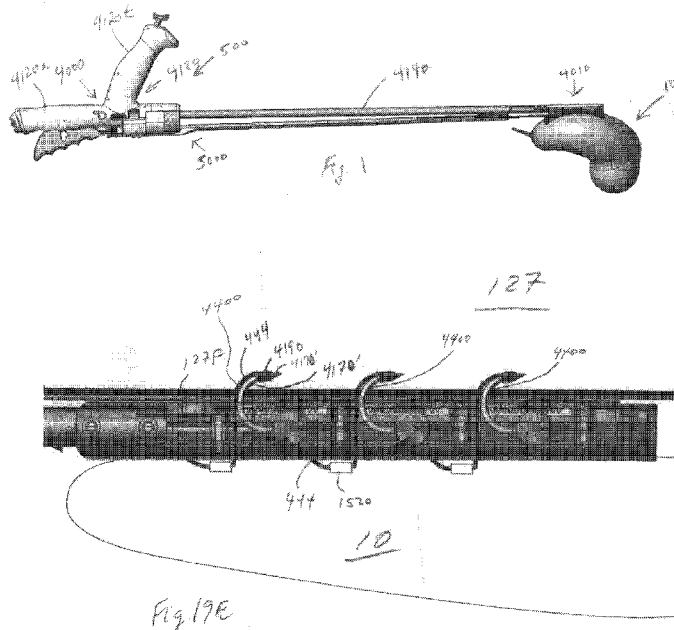
[US/US]; 26 Blanchford Court, Oakland, CA 94611 (US). **MAKOWER, Joshua** [US/US]; 661 University Avenue, Los Altos, CA 94022 (US). **JOHNSON, Dane, A.** [US/US]; 3301 Clay St. #104, San Francisco, CA 94118 (US). **SHIU, Brian, K.** [US/US]; 1377 Fisherhawk Drive, Sunnyvale, CA 94087 (US). **ACOSTA, Pablo, G.** [US/US]; 8272 Rinconada Court, Newark, CA 94560 (US). **LIMON, Timothy, A.** [US/US]; 10354 Byrne Ave., Cupertino, CA 95014 (US). **HUSS, Beverly** [US/US]; 530 Vine St., Menlo Park, CA 94025 (US). **LEE, Crystine, M.** [US/US]; 257 Glen Park Ave., San Rafael, CA 94901 (US).

(74) Agent: **CANNON, Alan, W.**; 942 Mesa Oak Court, Sunnyvale, CA 94086 (US).

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[Continued on next page]

(54) Title: TOOLS AND DEVICES FOR PERFORMING MINIMALLY INVASIVE ABDOMINAL SURGICAL PROCEDURES



(57) Abstract: Methods, systems, devices and assemblies are provided for treating a patient by: making an incision or puncture through the patient's skin over the abdominal cavity; establishing an initial tract through an opening formed by the incision or puncture; advancing an instrument through the tract; contacting a distal end portion of the instrument against an inner surface of the abdominal cavity; driving at least one stitching needle through the inner surface of the abdominal cavity; continuing the driving until the at least one stitching needle exits the inner surface of the abdominal cavity; anchoring a suture carried by each of the at least one stitching needle to a suture anchor at an exit location, respectively; and applying tension to each of the sutures.



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- 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))*
- (88) Date of publication of the international search report:**  
25 February 2010

**INTERNATIONAL SEARCH REPORT**

International application No  
PCT/US2009/045543

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. A61B17/04

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)  
A61F 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.
A	US 2006/282088 A1 (RYAN TIMOTHY J [US]) 14 December 2006 (2006-12-14) the whole document	1-22
A	US 2005/055038 A1 (KELLEHER BRIAN [US] ET AL) 10 March 2005 (2005-03-10) the whole document	1-22
A	US 2003/208208 A1 (CHU MICHAEL S H [US]) 6 November 2003 (2003-11-06) the whole document	1-22
A	WO 02/24078 A (OPUS MEDICAL INC [US]) 28 March 2002 (2002-03-28) the whole document	1-22
A	US 2003/216613 A1 (SUZUKI KEITA [JP] ET AL) 20 November 2003 (2003-11-20) the whole document	1-22

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
- "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

19 August 2009

Date of mailing of the international search report

04/01/2010

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

Grieb, Christian

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2009/045543

## 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.:  
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:

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 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.:

see additional sheet(s)

### 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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-22

- A surgical instrument comprising an elongate shaft, a working end platform formed on a distal end portion of said elongate shaft, a handle mounted on a proximal end portion of said elongate shaft, a stitching needle rotatably mounted relative to said platform and rotatable from a concealed position in which a tip of said stitching needle is concealed within said platform to an exit position where said tip is inserted into a suture anchor releasably attached to said platform, and counter-rotatable from said position where said tip is inserted into said suture anchor to said position in which said tip is concealed within said platform;

2. claims: 23-28

A paragastrically, extragastrically implantable device comprising an expandable member.

# INTERNATIONAL SEARCH REPORT

Information on patent family members .

International application No PCT/US2009/045543
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Patent document cited in search report	Publication date	Publication date	Patent family member(s)	Publication date
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