

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
14 August 2008 (14.08.2008)

PCT

(10) International Publication Number
WO 2008/097586 A3

- (51) International Patent Classification:
A61B 17/068 (2006.01)
- (21) International Application Number:
PCT/US2008/001586
- (22) International Filing Date: 6 February 2008 (06.02.2008)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/899,713 6 February 2007 (06.02.2007) US
60/967,666 6 September 2007 (06.09.2007) US
- (71) Applicant (for all designated States except US): **THE OHIO STATE UNIVERSITY RESEARCH FOUNDATION** [US/US]; 1960 Kenny Rd, Columbus, OH 43210-1063 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **NEEDLEMAN, Bradley, J.** [US/US]; 792 Bluffview Drive, Columbus, OH 43235 (US). **HAZEY, Jeffrey, W.** [US/US]; 4694 Aberdeen Avenue, Dublin, OH 43016 (US).
- (74) Agent: **MARTINEAU, Catherine, B.**; Macmillan, Sobanski & Todd, Llc, One Maritime Plaza, 5th Floor, 720 Water Street, Toledo, OH 43604 (US).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

- Published:**
- with international search report
- 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:
24 December 2008

(54) Title: ENDOLUMENAL RESTRICTION METHOD AND APPARATUS

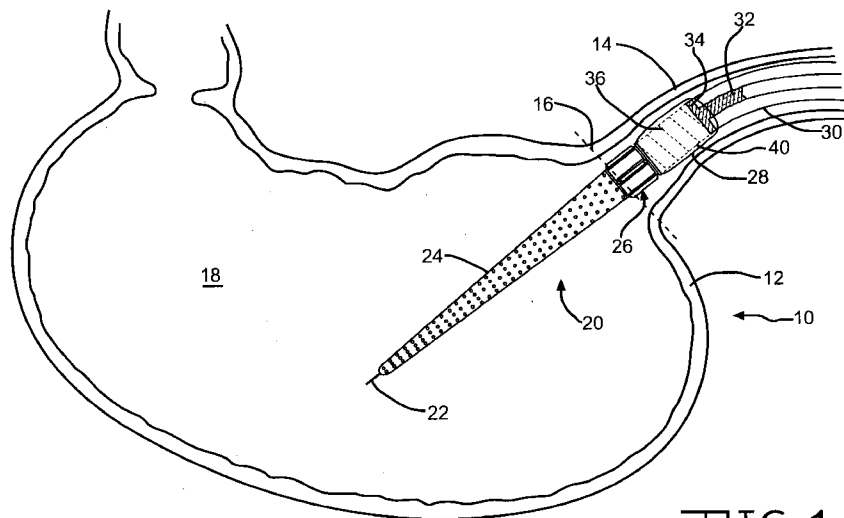


FIG. 1

(57) Abstract: An apparatus and method for non-surgically creating a restriction in a tissue is provided where a binding mechanism (36) is inserted into the issue. This invention also relates to an apparatus for creating a stoma of variable and reproducible size in a hollow organ.

WO 2008/097586 A3

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2008/001586

A. CLASSIFICATION OF SUBJECT MATTER INV. A61B17/068				
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 A61F				
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, 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	WO 02/15796 A (SURGICAL CONNECTIONS INC [US]) 28 February 2002 (2002-02-28)	1-7, 10-12, 16-24 13-15		
Y	page 2, lines 1-7 page 3, line 5 - page 4, line 16 page 13, line 4 - line 9 page 25, lines 26-30 page 28, lines 21-27 page 42, lines 12-26 figures 2,11,14,16,34,37,48 page 29, lines 5-11			
Y	US 6 726 677 B1 (FLAHERTY J CHRISTOPHER [US] ET AL) 27 April 2004 (2004-04-27) column 17, lines 21-43	13,14		
----- -/--				
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.				
<input checked="" type="checkbox"/> See patent family annex.				
* Special categories of cited documents :				
<table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none; vertical-align: top;"> *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 </td> <td style="width:50%; border: none; vertical-align: top;"> *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 </td> </tr> </table>			*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
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 <p align="center">4 July 2008</p>		Date of mailing of the international search report <p align="center">05/11/2008</p>		
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 <p align="center">Grieb, Christian</p>		

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2008/001586

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2006/264983 A1 (HOLSTEN HENRY [US] ET AL) 23 November 2006 (2006-11-23) figures 5,6	15
X	US 2003/055313 A1 (ANDERSON KIMBERLY A [US] ET AL) 20 March 2003 (2003-03-20) paragraphs [0016] - [0028] paragraphs [0129], [0130] figures 1-4,6,7	1-7, 10-12, 16-19, 21-24,31
X	WO 2005/092210 A (SATIEY INC [US]) 6 October 2005 (2005-10-06) page 2, line 30 - page 4, line 14 page 20, line 5 - line 29 page 22, line 27 - page 23, line 4 figures 2A,3A,5B,5C,5D	1-11,16, 21,23,24
X	WO 2005/079673 A (SATIETY INC [US]) 1 September 2005 (2005-09-01) page 1, lines 28-30 page 3, lines 3-10 page 8, lines 8-28 page 10, lines 13-29 page 21, line 34 - page 22, line 9 page 30, lines 1-17 figures 17A,17B,18A,19A,30,31 figures 41-49,52,66,67	1-6,10, 16,18
X	US 2004/006351 A1 (GANNOE JAMY [US] ET AL, GANNOE JAMY [US] ET AL) 8 January 2004 (2004-01-08) paragraphs [0008] - [0017], [0052], [0055] - [0058]; figures 8-10,9A	1-6, 10-12, 21,23,24
A	US 2004/082963 A1 (GANNOE JAMY [US] ET AL) 29 April 2004 (2004-04-29) paragraph [0048]; figure 10B	7,8

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/001586

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.: 25-30, 35-40
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:

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.:
1-24, 31

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: 1-24,31

Apparatus for creating a restriction in a hollow organ with provisions for gripping tissue and applying a fastener;

2. claims: 32-34

Apparatus for safely removing a coil fastener, comprising a protective cover;

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/001586

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0215796	A	28-02-2002	AU 8670401 A TW 510788 B US 2002072761 A1	04-03-2002 21-11-2002 13-06-2002
US 6726677	B1	27-04-2004	NONE	
US 2006264983	A1	23-11-2006	NONE	
US 2003055313	A1	20-03-2003	US 2007185372 A1	09-08-2007
WO 2005092210	A	06-10-2005	CA 2559206 A1 EP 1722691 A1 JP 2007528263 T US 2005203548 A1	06-10-2005 22-11-2006 11-10-2007 15-09-2005
WO 2005079673	A	01-09-2005	CA 2556228 A1 EP 1713402 A2	01-09-2005 25-10-2006
US 2004006351	A1	08-01-2004	AU 2003243707 A1 EP 1534145 A2 WO 2004004542 A2 US 2004215216 A1	23-01-2004 01-06-2005 15-01-2004 28-10-2004
US 2004082963	A1	29-04-2004	US 2004092974 A1 US 2005101977 A1	13-05-2004 12-05-2005