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- (71) Applicant (for all designated States except US):
ETHICON ENDO-SURGERY, INC. [US/US]; 4545
Creek Road, Cincinnati, OH 45242 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **BECKMAN, Andrew, T.** [US/US]; 676 Wilfert Drive, Cincinnati, OH 45245 (US). **WOODRUFF, Scott, A.** [US/US]; 1252
Delta Avenue, Cincinnati, OH 45208 (US).
- (74) Agents: **JOHNSON, Philip, S.** et al.; Johnson & Johnson,
One Johnson & Johnson Plaza, New Brunswick, NJ 08933
(US).
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CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,
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MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD,
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TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE,
DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,

[Continued on next page]

(54) Title: GASTRIC BAND DEVICE AND METHOD

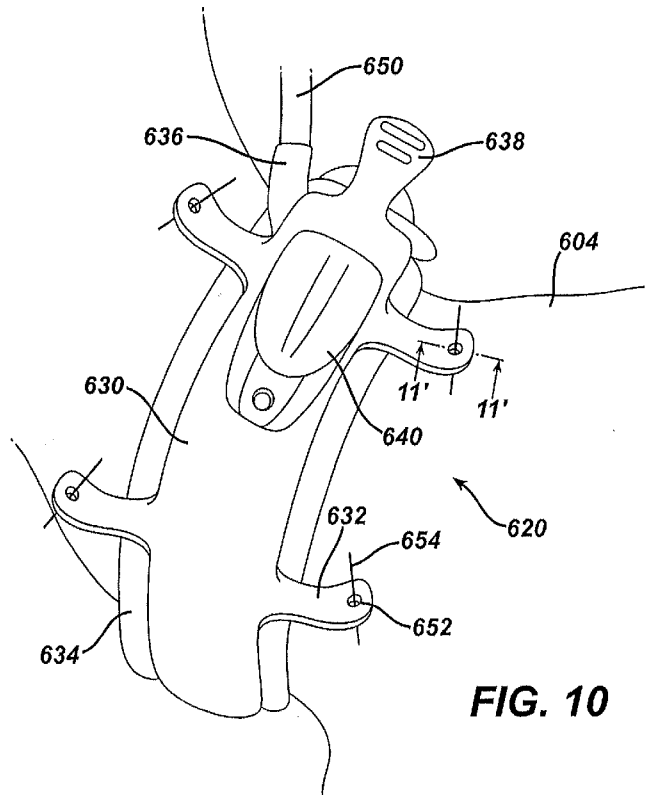


FIG. 10

(57) **Abstract:** An apparatus (620) for forming a gastric restriction includes an implantable band (630, 640) and at least one tab (632). In some versions, the at least one tab may serve to stabilize the apparatus as it forms a gastric restriction. In some versions, an opening may be formed in the tabs such that sutures (654) may be used. In some versions, a tissue scaffold and/or matrix may be used on the implantable band and/or the tabs to facilitate long term support for the implantable band, such as by substantially preventing the implantable band from sliding along an axis defined by an anatomical structure (604) about which the implantable band is wrapped.





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, ML, MR, NE, SN, TD, TG).

— *as to the applicant's entitlement to claim the priority of
the earlier application (Rule 4.17(iii))*

Declarations under Rule 4.17:

- *as to the identity of the inventor (Rule 4.17(i))*
- *as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii))*

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

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. A61F5/00 A61F2/00
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)
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 practicable, 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	EP 0 923 356 A1 (PIER ARNOLD [DE]) 23 June 1999 (1999-06-23)	1,2,7,9, 10
Y	paragraphs [0006], [0037], [0044]; figures 4,6,7,11,12	3-6, 11-19
X	US 5 152 770 A (BENGMARK STIG [SE] ET AL) 6 October 1992 (1992-10-06)	1,7,10
Y	column 2, line 26 - column 4, line 54; figures 1-5	3-6, 11-19
A	FR 2 921 822 A1 (BRANCHE DOMINIQUE [FR]) 10 April 2009 (2009-04-10) page 5, line 29 - page 6, line 22 page 7, lines 10-30	1,2,8-10
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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 25 May 2012	Date of mailing of the international search report 06/06/2012
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 Dennler, Samuel

INTERNATIONAL SEARCH REPORT

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2010/087843 A1 (BERTOLOTE TIAGO [CH] ET AL) 8 April 2010 (2010-04-08) paragraphs [0014] - [0016], [0073] - [0074], [0078]; figures 3,4A-4C -----	8
A	US 2009/216256 A1 (NICHOLSON IV WILLIAM DANIEL [US]) 27 August 2009 (2009-08-27) the whole document -----	1,2,9,10
X	US 5 910 149 A (KUZMAK LUBOMYR I [US]) 8 June 1999 (1999-06-08) -----	1-7,9-19
Y	abstract; figures 1-3 column 2, line 53 - column 4, line 10 -----	3-6, 11-19
Y	US 2008/319435 A1 (RIOUX ROBERT J [US] ET AL) 25 December 2008 (2008-12-25) paragraphs [0051] - [0052], [0055] - [0056]; figures 5A-B, -----	3,5,6, 11-19
Y	US 2009/082618 A1 (ABELE WOLFGANG [DE] ET AL) 26 March 2009 (2009-03-26) paragraphs [0011], [0012]; figure 1 -----	3,5,6,9, 11,14,17
Y	US 2005/119674 A1 (GINGRAS PETER [IE]) 2 June 2005 (2005-06-02) paragraphs [0213] - [0215]; figures 36,37 -----	3-6, 11-15,17
Y	US 2008/146868 A1 (HENRI ROBERT ANTOINE JEAN [BR] ET AL) 19 June 2008 (2008-06-19) paragraph [0015]; figures 1-2 -----	3-6, 11-15,17
Y	US 2009/163763 A1 (SAYET PETER H [US] ET AL) 25 June 2009 (2009-06-25) paragraph [0051]; figures 1-3 -----	9

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/058758

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.: 20
because they relate to subject matter not required to be searched by this Authority, namely:
Claim 20 is related to a method of forming a gastric restriction using an implantable band. This subject-matter is considered to be covered by the provisions of Rule 39.1(iv) PCT (methods 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.:

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, 2, 7-10

An implantable apparatus comprising an inflatable band and a plurality of stabilization tabs, each of the tabs having a wing-like shape and being configured to be inflatable, solving the technical problem of providing a wider stomach engaging area, and thus further stability, for the apparatus as the inner band inflates;

2. claims: 3-6, 11-19

An implantable apparatus comprising an inflatable band and a tissue matrix in communication with the band, the tissue matrix being configured to encourage tissue growth, solving the technical problem of providing a long-term, or permanent, attachment of the apparatus to the neighbouring tissue.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2011/058758

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0923356	A1	23-06-1999	AT 223184 T 15-09-2002 EP 0923356 A1 23-06-1999 WO 9856321 A1 17-12-1998
US 5152770	A	06-10-1992	DE 4109314 A1 26-09-1991 DE 9014048 U1 13-12-1990 SE 464558 B 13-05-1991 SE 9001033 A 13-05-1991 US 5152770 A 06-10-1992
FR 2921822	A1	10-04-2009	NONE
US 2010087843	A1	08-04-2010	EP 2362762 A1 07-09-2011 US 2010087843 A1 08-04-2010 WO 2010042493 A1 15-04-2010
US 2009216256	A1	27-08-2009	US 2007249894 A1 25-10-2007 US 2009216256 A1 27-08-2009
US 5910149	A	08-06-1999	NONE
US 2008319435	A1	25-12-2008	NONE
US 2009082618	A1	26-03-2009	DE 102005021893 A1 09-11-2006 EP 1876999 A2 16-01-2008 US 2009082618 A1 26-03-2009 WO 2006117216 A2 09-11-2006
US 2005119674	A1	02-06-2005	US 2005119674 A1 02-06-2005 US 2011004054 A1 06-01-2011
US 2008146868	A1	19-06-2008	NONE
US 2009163763	A1	25-06-2009	US 2003225311 A1 04-12-2003 US 2004249241 A1 09-12-2004 US 2006167336 A1 27-07-2006 US 2009163763 A1 25-06-2009