

(51) International Patent Classification:
A61B 17/08 (2006.01)(21) International Application Number:
PCT/US2012/042805(22) International Filing Date:
15 June 2012 (15.06.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/497,899 16 June 2011 (16.06.2011) US
61/498,495 17 June 2011 (17.06.2011) US(71) Applicant (for all designated States except US): **CURAS-EAL INC.** [US/US]; 2231 Calle de Luna, Santa Clara, CA 95054 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CARRISON, Harold Francis** [US/US]; 410 Dolores Court, Pleasanton, CA 94566 (US). **HUYNH, Yolanda Pacho** [US/US]; 3855 Grandbrook Way, San Jose, CA 95111 (US).(74) Agents: **WU, Walter** et al.; Morrison & Foerster LLP, 755 Page Mill Road, Palo Alto, CA 94304-1018 (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, CL, 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, 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.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, 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, 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).

Published:

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

(88) Date of publication of the international search report:
28 March 2013

(54) Title: FISTULA TREATMENT DEVICES AND RELATED METHODS

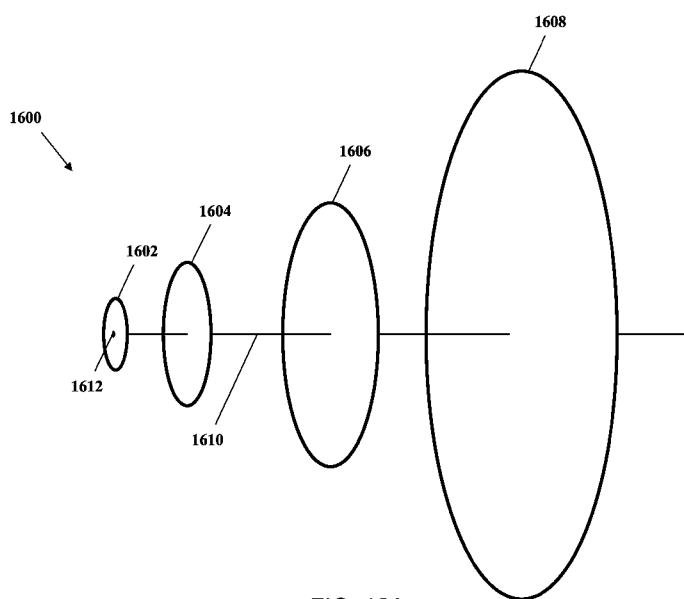


FIG. 16A

(57) Abstract: Disclosed herein are implantable fistula treatment devices and related methods. In some embodiments, a distal anchor for an implantable fistula treatment device may comprise a suture and a plurality of foldable members including at least a distal-most foldable member and a proximal-most foldable member. The distal-most foldable member may comprise a suture attachment structure. The distal-most foldable member may comprise a distal first average dimension substantially parallel to the longitudinal axis of the suture, a distal second average dimension orthogonal to the distal first average dimension, and a distal third average dimension orthogonal to the distal first and second average dimensions. The distal first average dimension may be no greater than 30% of the greater of the distal second and third average dimensions. The proximal-most foldable member may be configured to couple to a surface of a body lumen or a distal opening of a fistula.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/042805

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61B 17/08 (2012.01)

USPC - 606/213

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 17/03, 17/08 (2012.01)

USPC - 604/34, 213, 215, 907; 606/151, 157, 213

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2010/0076463 A1 (MAVANI et al) 25 March 2010 (25.03.2010) entire document	1-3
Y	US 2002/0026210 A1 (ABDEL-GAWWAD) 28 February 2002 (28.02.2002) entire document	1-3

☐ 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

14 November 2012

Date of mailing of the international search report

28 NOV 2012

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2012/042805

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.: 4-25, 29-34
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 extra 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 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.:
1-3

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

International application No.

PCT/US2012/042805

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-3 are drawn to a distal anchor.

Group II, claims 26-28 are drawn to a method of sealing a fistula tract.

Group III, claims 35-39 are drawn to an irrigation catheter and irrigating method.

The inventions listed as Groups I, II and III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical feature of Group I invention is a distal anchor that comprises a number of foldable members as claimed therein and is not present in the invention of Group II or Group III; the special technical feature of Group II invention is a method of sealing a fistula tract that describes positioning first and second sealing members as claimed therein and is not present in the invention of Group I or Group III; and the special technical feature of Group III invention is an irrigation catheter and irrigating method that includes using a tubular member with apertures therethrough comprising a brushing member.

Since none of the special technical features of the Groups I-III inventions are found in more than one of the inventions, unity is lacking.