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[Continued on next page]

(54) Title: ENDOVASCULAR DEVICES AND METHODS FOR EXPLOITING INTRAMURAL SPACE

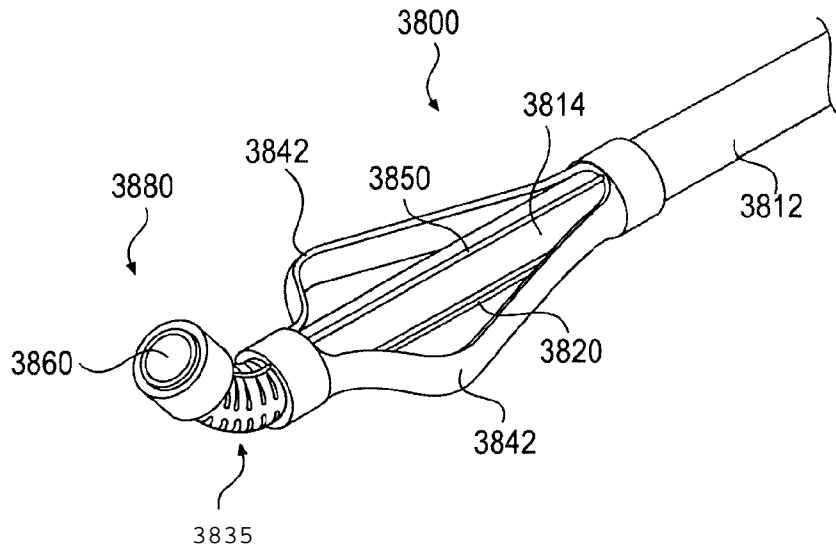


FIG. 38C

(57) Abstract: Devices and methods for exploiting intramural (e.g., subintimal) space of a vascular wall to facilitate the treatment of vascular disease, particularly total occlusions. For example, the devices and methods disclosed herein may be used to visually define the vessel wall boundary, protect the vessel wall boundary from perforation, bypass an occlusion, and/or remove an occlusion.

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see Notice of 7 August 2008

INTERNATIONAL SEARCH REPORT

International application No PCT/US2007/024209

A. CLASSIFICATION OF SUBJECT MATTER
 INV. A61B17/22
 ADD. A61B17/00 A61B17/34 A61B17/32 A61B19/00

According to International Patent Classification (IPC) or to national classification and IPC

B. RELEDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 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
Y	US 2003/109809 A1 (JEN JIMMY [US] ET AL) 12 June 2003 (2003-06-12) paragraph [0067] - paragraph [0068]; figures 8a-c -----	3-22
Y	US 2005/038467 A1 (HEBERT STEPHEN [US] ET AL) 17 February 2005 (2005-02-17) paragraph [0043] - paragraph [0048]; figures 1c,2d,10c -----	3-22
A	US 2003/120195 A1 (MILO CHARLES F [US] ET AL) 26 June 2003 (2003-06-26) abstract; figure 3c -----	3
A	US 6 506 178 B1 (SCHUBART PETER J [US] ET AL) 14 January 2003 (2003-01-14) abstract; figures 7,8a,b -----	3
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Further documents are listed in the continuation of Box C See patent family annex

* Special categories of cited documents

<p>¹A document defining the general state of the art which is not considered to be of particular relevance</p> <p>¹E¹ earlier document but published on or after the international filing date</p> <p>"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)</p> <p>¹O document referring to an oral disclosure, use exhibition or other means</p> <p>¹P document published prior to the international filing date but later than the priority date claimed</p>	<p>¹T 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</p> <p>"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</p> <p>"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</p> <p>¹S¹ document member of the same patent family</p>
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Date of the actual completion of the international search 22 April 2008	Date of mailing of the international search report 09/07/2008
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Name and mailing address of the ISA/ European Patent Office, P B 5818 Palenlaan 2 NL - 2280 HV Rijswijk Tel (+31-70) 340-2040 Tx 31 651 epo nl. Fax (+31-70) 340-3016	Authorized officer Moers , Roel of
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/024209

C(Contl filiation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category'	Citation of document with indication where appropriate, of the relevant passages	Relevant to claim No
A	US 6 036 717 A (MERS KELLY WILLIAM C [US] ET AL) 14 March 2000 (2000-03-14) column 5, line 14 - line 42; figures 1-3 -----	13-16
A	US 6 126 649 A (VANTASSEL ROBERT A [US] ET AL) 3 October 2000 (2000-10-03) abstract; figures 1-3 -----	1
A	US 5 409 453 A (LUNDQUIST INGEMAR H [US] ET AL) 25 April 1995 (1995-04-25) column 8, line 17 - line 41; figure 5 -----	18

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/024209

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 1, 2, 54-63, 88-106, 135-138
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 **D** 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 allsearchable 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

3-22

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 : 3-22

System for facilitating treatment comprising intramural orienting device having an expandable orienting element and a deflectable tip with actuation members.

2. claims : 23-37

System for facilitating treatment comprising intramural orienting device having expandable orienting element including a pair of wings.

3. claims : 38-53

System for facilitating treatment comprising intramural orienting device having expandable orienting element and a bearing surface.

4. claims : 64-81

System for facilitating treatment comprising intramural orienting device having a side port, an expandable orienting element and a deflectable tip with actuation members.

5. claims : 82-87

System for facilitating treatment comprising intramural orienting device having an inflatable orienting element and a deflectable tip, configured to allow deflection only in a specific plane.

6. claims : 107-127

System for facilitating treatment comprising intramural orienting device having a deflectable tip, a tension member and at least one inflation member.

7. claims : 128-134

System for facilitating treatment comprising intramural orienting device having a deflectable tip, a tension member, at least one inflation member, separate lumens in a planetary fashion containing a metallic element

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

8. claims : 139-156

A device comprising an elongate shaft defining a planetary lumen in communication with a first balloon.

9. claims : 157-176

A catheter comprising an elongate shaft defining a first planetary lumen with a first wire.

10. claims : 177-194

A catheter comprising an elongate shaft and a first inflation member urging a distal portion to assume a deflected shape.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/024209

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003109809	A1	12-06-2003	AU 2002351293 A1 09-07-2003
			WO 03053504 A2 03-07-2003
			US 2005027213 A1 03-02-2005

US 2005038467	A1	17-02-2005	NONE

us 2003120195	A1	26-06-2003	NONE

us 6506178	B1	14-01-2003	NONE

us 6036717	A	14-03-2000	NONE

us 6126649	A	03-10-2000	NONE

us 5409453	A	25-04-1995	NONE
