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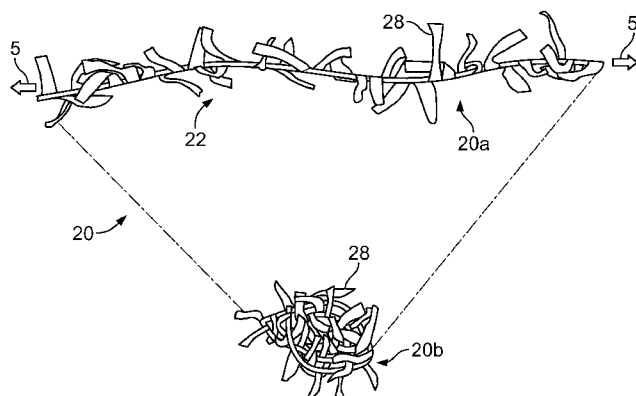


FIG. 3

(57) Abstract: Disclosed are implantable medical devices for the occlusion of a bodily lumen, cavity, vessel, or organ, as well as methods for manufacturing such occlusion devices, and methods for treating a subject using the occlusion devices. The devices generally include a wire having shape memory properties and a flexible membranous material disposed about the wire. Some embodiments include a lateral fringe on the membranous material. Some embodiments include a fluid capture cup affixed to the wire.



INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER INV. A61B17/12 ADD.		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
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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, 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 2010/115076 A2 (ENDOSHAPE INC [US]; TROMMETER JULIE MARIE [US]; LYONS MICHAEL B [US];) 7 October 2010 (2010-10-07)	29, 30, 32-34
A	paragraphs [0053] - [0054]; figures 4c,4d -----	1-19
A,P	US 2012/226304 A1 (RYAN CHELSEY ELIZABETH [US] ET AL) 6 September 2012 (2012-09-06) figure 2b ----- -/--	1-19
<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 :		
"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 <p align="center">12 September 2013</p>		Date of mailing of the international search report <p align="center">18/09/2013</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">Erbel, Stephan</p>

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.
X	US 6 702 834 B1 (BOYLAN JOHN F [US] ET AL) 9 March 2004 (2004-03-09) column 1, lines 8-24,29-31 column 4, lines 28-38 column 5, lines 2-4 column 7, line 32 - line 49 column 25, lines 8-30 figures 41-42 ePTFE; column 36, line 28	1,2,5-8, 37,40,41
X	----- US 2001/003801 A1 (STRECKER ERNST-PETER [DE]) 14 June 2001 (2001-06-14)	1,2, 4-12, 14-19
A	paragraphs [0015], [0029] - [0030], [0033] - [0034], [0040] - [0041], [0043] figures 13-15 claim 33	42
X	----- US 2006/271086 A1 (RAMZIPOOR KAMAL [US] ET AL) 30 November 2006 (2006-11-30) figure 1 figure 11 paragraphs [0003], [0009], [0012] - [0014], [0026], [0029], [0033] - [0038], [0040] - [0041], [0045]	20-27, 29-35
X	----- US 2009/297582 A1 (MEYER STEVEN [US] ET AL) 3 December 2009 (2009-12-03) paragraphs [0313], [0315] - [0316], [0318] - [0321] figures 5,7,11-12	20-24, 26,27
A	----- US 2009/018569 A1 (DESAI RUPESH [US] ET AL) 15 January 2009 (2009-01-15) paragraph [0022]; figures 5,13,18	28,36
X	----- WO 01/64112 A1 (PRODESCO [US]; GREENHALGH E SKOTT [US]) 7 September 2001 (2001-09-07)	37,40, 41,46
Y	figure 11 page 16, lines 3-6 page 12, lines 22-32 page 16, line 35 - page 17, line 3 page 4, lines 28-29	38,39
X	----- EP 1 733 702 A2 (NITINOL DEV CORP [US]) 20 December 2006 (2006-12-20) figures 3,5b, 9 "polymeric membranes"; paragraph [0012]	37,46
Y	----- WO 2005/042081 A1 (PEACOCK JAMES C III [US]) 12 May 2005 (2005-05-12) paragraphs [0113] - [0114]; figures 5-6	38,39

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/021209

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.: **43-45(completely); 20-36, 46-50(partially)**
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210

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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2013/021209

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2010115076 A2	07-10-2010	CA 2785621 A1	07-10-2010
		EP 2413840 A2	08-02-2012
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		US 2006271098 A1	30-11-2006
		WO 2005042081 A1	12-05-2005

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-19

An implantable occlusion device, directed at a fringe formed along a polymer sheet.

2. claims: 20-36

Methods for producing an implantable occlusion device, directed at the produced implant having a polymer tube or wrapping around the wire.

3. claims: 37-42, 46-50

An implantable occlusion device, directed at a flexible cup element.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Claims Nos.: 43-45(completely); 20-36, 46-50(partially)

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery and therapy

Claims 43 to 45 relate to a method for treating the human body by surgery and therapy. According to Rule 39.1 (iv) PCT the international search authority is not required to search subject matter falling under this category. Claims 20 to 36 and 46-50 partially relate to a method for treating the human body by surgery and therapy. According to Rule 39.1 (iv) PCT the international search authority is not required to search subject matter falling under this category. The last step of the methods claimed ("allowing the elongated coil to recoil") is typically performed performed endovascularly, and is therefore to be considered both surgical and therapeutic. As it is theoretically conceivable to perform the last step outside the body of the patient the international search authority therefore has searched said range of claims in their method category and also for devices suitable to be used in such methods, in conformance with PCT Guideline 9.08.