

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
22 November 2007 (22.11.2007)

PCT

(10) International Publication Number  
WO 2007/134239 A3

- (51) International Patent Classification:  
A61F 2/90 (2006.01) A61L 31/16 (2006.01)
- (21) International Application Number:  
PCT/US2007/068790
- (22) International Filing Date: 11 May 2007 (11.05.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/747,164 12 May 2006 (12.05.2006) US

(74) Agents: JOHNSON, Philip, S et al.; Johnson & Johnson, One Johnson & Johnson Plaza, New Brunswick, New Jersey 08933 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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.

(71) Applicant (for all designated States except US): CORDIS CORPORATION [US/US]; 14201 NW 60th Avenue, Miami Lakes, Florida 33014 (US).

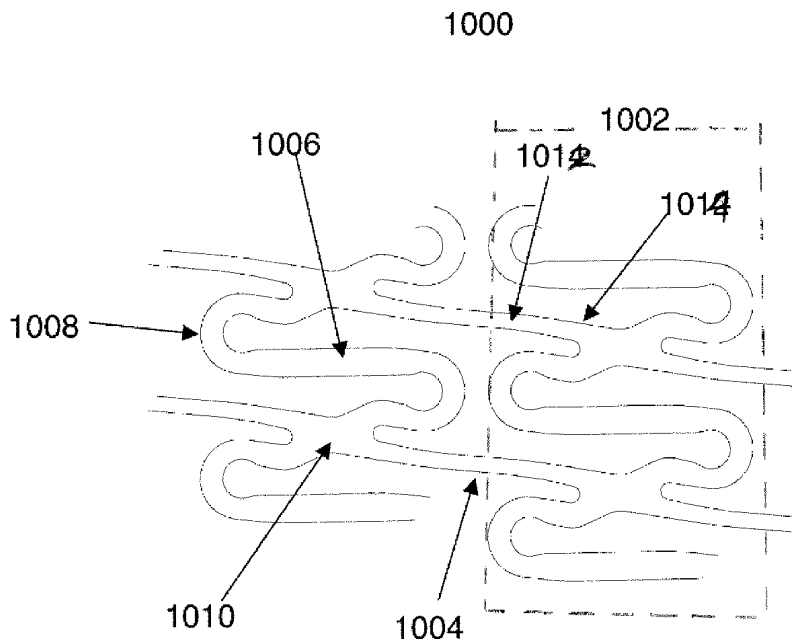
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BURGERMEISTER, Robert [US/US]; 401 Stony Brook Drive, Bridgewater, New Jersey 08807 (US). DAVE, Vipul Bhupendra [US/US]; 20 Francis Drive, Hillsborough, NJ 08844 (US). OVERAKER, David [US/US]; 9 West Street, Annandale, New Jersey 08801 (US).

Published:  
— with international search report

[Continued on next page]

(54) Title: BALLOON EXPANDABLE BIOABSORBABLE DRUG ELUTING FLEXIBLE STENT



(57) Abstract: Polymeric materials may be utilized to fabricate stents. The stents may be balloon expandable or self-expanding. The polymeric materials may include additives such as drugs or other bioactive agents as well as plasticizers and/or radiopaque agents. The polymeric stent (1000) has a plurality of hoop components (1002) interconnected by at least one flexible straight connector (1004). The hoop components (1002) are formed as a continuous series of alternating substantially longitudinally oriented strut members (1006) and connector junction struts (1010), whereas the longitudinal strut (1006) is connected to the connector junction strut (1010) by alternating substantially circumferentially oriented arc members (1008).

WO 2007/134239 A3



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**(88) Date of publication of the international search report:**

10 January 2008

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2007/068790A. CLASSIFICATION OF SUBJECT MATTER  
INV. A61F2/90 A61L31/16

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 A61L

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.
X	US 2004/267353 A1 (GREGORICH DANIEL [US]) 30 December 2004 (2004-12-30) paragraphs [0033], [0041], [0042], [0149], [0161], [0166], [0169], [0171] - [0178]; figures 3,4,6-10	1-3, 5-25,32
Y	-----	4,26-31
X	WO 2006/005026 A (CORDIS CORP [US]; BURGERMEISTER ROBERT [US]; OVERAKER DAVID [US]; GRIS) 12 January 2006 (2006-01-12) page 1, line 34 - page 2, line 5 page 5, lines 11-21 page 9, lines 11-24 page 19, line 12 - page 20, line 20 figures 1,3A	1-3, 5-25,32
Y	-----	4,26-31
	----- -/--	

 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 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.

\*&amp;\* document member of the same patent family

Date of the actual completion of the international search

29 October 2007

Date of mailing of the international search report

05/11/2007

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Portoni, Luisa

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2007/068790

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2005/009295 A (ADVANCED STENT TECHNOLOGIES IN [US]) 3 February 2005 (2005-02-03) paragraph [0089]; figures 43,44 paragraph [0114] - paragraph [0117] paragraphs [0124] - [0131] -----	1-3,5-7, 18-21,32
Y	WO 02/085253 A (UNIV LELAND STANFORD JUNIOR [US]; ELKINS CHRISTOPHER J [US]; DAKE MICH) 31 October 2002 (2002-10-31) page 10, line 27 - page 11, line 2 page 12, lines 8-23 -----	4,26-31
Y	US 5 792 400 A (TALJA MARTTI [FI] ET AL) 11 August 1998 (1998-08-11) column 8, line 65 - column 9, line 5 -----	4,26,27
Y	US 2004/098110 A1 (WILLIAMS MICHAEL S [US] ET AL) 20 May 2004 (2004-05-20) paragraph [43.44] -----	4,26-28
E	EP 1 837 042 A (CORDIS CORP [US]) 26 September 2007 (2007-09-26) the whole document -----	1,4-32
E	EP 1 797 910 A (CORDIS CORP [US]) 20 June 2007 (2007-06-20) the whole document -----	1-32

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/068790

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2004267353	A1	30-12-2004	EP 1635737 A1	22-03-2006
			US 2006129230 A1	15-06-2006
			WO 2005009294 A1	03-02-2005
WO 2006005026	A	12-01-2006	AU 2005260731 A1	12-01-2006
			CA 2572265 A1	12-01-2006
			EP 1773244 A2	18-04-2007
WO 2005009295	A	03-02-2005	CA 2524917 A1	03-02-2005
			EP 1643937 A1	12-04-2006
			JP 2007523683 T	23-08-2007
WO 02085253	A	31-10-2002	NONE	
US 5792400	A	11-08-1998	NONE	
US 2004098110	A1	20-05-2004	NONE	
EP 1837042	A	26-09-2007	CA 2579193 A1	24-08-2007
			JP 2007222635 A	06-09-2007
			US 2007203569 A1	30-08-2007
EP 1797910	A	20-06-2007	CA 2571139 A1	13-06-2007
			JP 2007160103 A	28-06-2007
			US 2007135895 A1	14-06-2007
			US 2007135901 A1	14-06-2007