

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
13 September 2001 (13.09.2001)

PCT

(10) International Publication Number  
**WO 01/66038 A3**

(51) International Patent Classification<sup>7</sup>: **A61F 2/06**

(21) International Application Number: PCT/US01/06764

(22) International Filing Date: 2 March 2001 (02.03.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/186,586 3 March 2000 (03.03.2000) US

(71) Applicant: **COOK INCORPORATED** [US/US]; 925  
South Curry Pike, P.O. Box 489, Bloomington, IN  
47402-0489 (US).

(72) Inventor: **GREENBERG, Roy, K.**; 240 Fox Hollow  
Drive, Suite 211, Mayfield, OH 44124 (US).

(74) Agent: **NESS, Anton, P.**; P.O. Box 2269, Bloomington,  
IN 47402-2269 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

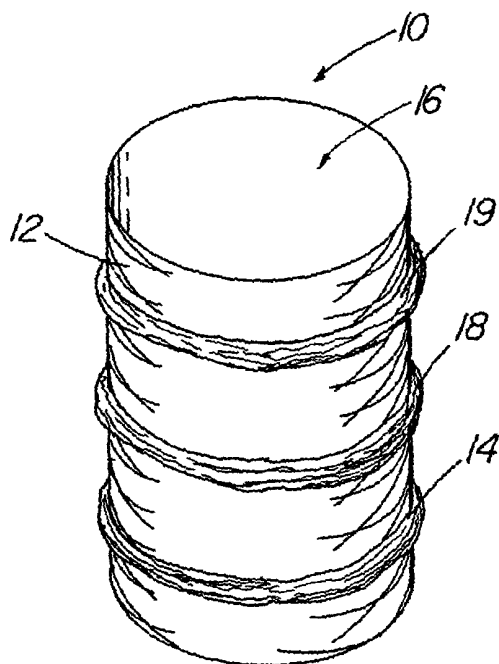
(84) Designated States (*regional*): Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:  
— with international search report

(88) Date of publication of the international search report:  
28 March 2002

*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.*

(54) Title: ENDOVASCULAR DEVICE HAVING A STENT



(57) Abstract: A stent (10, 20, 30, 40, 50, 58, 60, 80, 90, 100, 150, 254, 256, 300) having an inflatable member or a plurality of members affixed directly thereto. One type of inflatable member, or pair or plurality of members, may be affixed to the outer stent surface to expand upon inflation to seal against the vessel wall, and optionally to each other as well, and may be annular (14, 18, 20, 42, 46, 82, 94) or spirally (22, 24, 26, 84) or asymmetrically (32, 34, 36) configured. In another embodiment a member (304), or pair of opposed members (306), can be affixed to the inner stent surface and used to occlude the lumen upon inflation. The device of the present invention can also be utilized with conventional stent grafts (152) to protect branch vessels that are involved in the aneurysm span.

WO 01/66038 A3

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/06764

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61F2/06

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 7 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 practical, search terms used)

WPI Data, 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 5 693 088 A (LAZARUS) 2 December 1997 (1997-12-02)	1,2,5,6, 11-13
Y	column 14, line 20 -column 16, line 26; figures 3-5	3,7
Y	US 6 030 414 A (TAHERI) 29 February 2000 (2000-02-29) figure 5	3
X	WO 99 39662 A (TRIAD VASCULAR SYSTEMS, INC.) 12 August 1999 (1999-08-12)	1,2,4, 11,13
Y	page 11, line 18 -page 18, line 16; figures 1-7	7
A	WO 97 29716 A (SCIMED LIFE SYSTEMS, INC.) 21 August 1997 (1997-08-21)	



Further documents are listed in the continuation of box C.



Patent family members are listed in 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.

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

Date of the actual completion of the international search

15 October 2001

Date of mailing of the international search report

23/10/2001

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

Smith, C

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/06764

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5693088	A	02-12-1997	AU 1091095 A WO 9513033 A1 US 6165214 A US 5871536 A	29-05-1995 18-05-1995 26-12-2000 16-02-1999
US 6030414	A	29-02-2000	NONE	
WO 9939662	A	12-08-1999	US 2001023369 A1 AU 2663699 A EP 1054648 A1 WO 9939662 A1	20-09-2001 23-08-1999 29-11-2000 12-08-1999
WO 9729716	A	21-08-1997	US 5871537 A EP 0959810 A1 WO 9729716 A1 US 6059823 A	16-02-1999 01-12-1999 21-08-1997 09-05-2000