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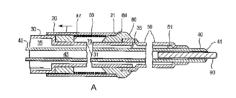
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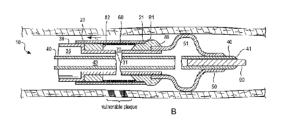
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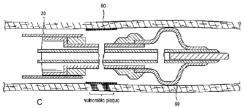
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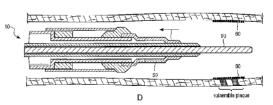
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHODS AND SYSTEMS FOR TREATING VULNERABLE PLAQUES

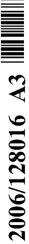








(57) Abstract: The invention provides methods and catheter-based delivery systems for treating vulnerable plaque atherosclerotic conditions using lightweight vulnerable plaque shields. Combination catheters are provided that include a selectively deployable occlusion balloon to occlude blood flow and a mechanism for selectively deploying a lightweight vulnerable plaque shield, which is either self-expanding or balloon-deployable, within a blood vessel.



INTERNATIONAL SEARCH REPORT

International application No. PCT/US06/20495

A.	CLASSIFICATION	OF SUBJECT MATTER
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IPC(8) - A61F 11/00 (2006.01)

USPC - 606/108

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

FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC(8) - A61F 11/00 (2006.01)

USPC - 623/1.12, 1.13, 1.32, 1.33, 1.43, 1.44, 1.45, 1.47-1.49, 1.51-1.54, 606/108, 193, 195

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Mark A. Saab's 1999 article, "Applications of High Pressure Balloons in the Medical Device Industry", (posted at - http://www.advpoly.com/Documents/MedicalBalloonPaper.pdf)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) USPTO EAST System (US, USPG-PUB, EPO, DERWENT), MicroPatent, IP.com, DialogPro

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
US 5,846,246 A (DIRKS et al) 08 December 1998 (08.12.1998) entire document	6-7, 9, 15, 26-27, 29, 35
	1-5, 8, 10, 12-13, 14, 16- 25, 28, 30, 32-34
US 2004/0034303 A1 (KOROTKO) 19 February 2004 (19.02.2004) entire document	6, 11, 26, 31
US 2005/0038498 A1 (DUBROW et al) 17 February 2005 (17.02.2005) entire document	1-5, 8, 10, 13, 14, 16-25, 28, 30, 32-34
Saab, Mark A. 'Applications of High Pressure Balloons in the Medical Device Industry', (http://www.advpoly.com/Documents/MedicalBalloonPaper.pdf), 1999, page 12	5, 12, 23, 25, 32, 34
US 2003/0120195 A1 (MILO et al) 26 June 2003 (26.06.2003) entire document	16-17
US 2004/0186507 A1 (HALL et al) 23 September 2004 (23.09.2004) entire document	1-35
	US 5,846,246 A (DIRKS et al) 08 December 1998 (08.12.1998) entire document US 2004/0034303 A1 (KOROTKO) 19 February 2004 (19.02.2004) entire document US 2005/0038498 A1 (DUBROW et al) 17 February 2005 (17.02.2005) entire document Saab, Mark A. 'Applications of High Pressure Balloons in the Medical Device Industry', (http://www.advpoly.com/Documents/MedicalBalloonPaper.pdf), 1999, page 12 US 2003/0120195 A1 (MILO et al) 26 June 2003 (26.06.2003) entire document

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