



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification<sup>6</sup> : A61F 2/06</p>	<p>A3</p>	<p>(11) International Publication Number: <b>WO 96/25897</b> (43) International Publication Date: 29 August 1996 (29.08.96)</p>
<p>(21) International Application Number: PCT/US96/02406 (22) International Filing Date: 22 February 1996 (22.02.96) (30) Priority Data: 08/392,143 22 February 1995 (22.02.95) US (71) Applicant: MENLO CARE, INC. [US/US]; Suite 101, 1350 Willow Road, Menlo Park, CA 94025 (US). (72) Inventors: BLEY, Robert, S.; 298 Stanford Avenue, Menlo Park, CA 94025 (US). VAN BLADEL, Kevin, H.; 13436 Pastel Lane, Mountain View, CA 94040 (US). THOMAS, Joseph, R.; 2504 Melendy, San Carlos, CA 94070 (US). (74) Agents: SCHELLER, James, C. et al.; Blakely, Sokoloff, Taylor &amp; Zafman, 7th floor, 12400 Wilshire Boulevard, Los Angeles, CA 90025-1026 (US).</p>		<p>(81) Designated States: AU, CA, JP, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). <b>Published</b> <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 21 November 1996 (21.11.96)</p>
<p>(54) Title: COVERED EXPANDING MESH STENT</p>		
<p>(57) Abstract</p>		
<p>The present invention is a medical device such as a stent in the form of an expandable mesh with an expandable polymer layer thereon. The mesh is metal or plastic. The polymer may be any of a variety of expandable polymers, which either expand upon hydration, or expand without significant resistance. The invention may be used, for example, as an expandable biliary, vascular, endotracheal, esophageal, or prostatic device.</p>		

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GA	Gabon			VN	Viet Nam

# INTERNATIONAL SEARCH REPORT

Internat. Application No  
PCT/US 96/02406

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 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 6 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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO,A,93 06781 (BOSTON SCIENTIFIC CORP.) 15 April 1993 see the whole document ---	1-8
Y	US,A,4 883 699 (LAWRENCE) 28 November 1989 cited in the application see abstract; figures ---	1-8
X	WO,A,90 05554 (BOSTON SCIENTIFIC CORPORATION) 31 May 1990 cited in the application see page 7, line 2 - page 8, line 9; figures ---	16-24
X	US,A,5 089 006 (STILES) 18 February 1992 cited in the application see column 2, line 29 - line 64; figures ---	16,18-22
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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
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- \*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

25 September 1996

Date of mailing of the international search report

11. 10. 96

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**INTERNATIONAL SEARCH REPORT**

International Application No  
PCT/US 96/02406

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO,A,94 24961 (SCHNEIDER) 10 November 1994 see claims 13,19 ---	1
A	US,A,5 139 480 (RANDALL) 18 August 1992 ---	
P,A	WO,A,95 11055 (SCIMED LIFESYSTEMS) 27 April 1995 -----	

# INTERNATIONAL SEARCH REPORT

ernational application No.

PCT/US 96/ 02406

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 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.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Please see annex

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 fee, this Authority did not invite payment of any additional fee.
  
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.

No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/210

MULTIPLE INVENTIONS:

1. Subject No. 1 : Claims 1-15  
A stent having an expandable mesh and a hydrophilic expandable polymer coupled to said mesh which expands upon hydration.
  
2. Subject No. 2 : Claims 16-24  
A stent having an expandable mesh and an expandable polymer coupled to said mesh, the expandable polymer is moveable between the fourth and third configuration without folding or bunching.

# INTERNATIONAL SEARCH REPORT

...information on patent family members

Inter- national Application No

PCT/US 96/02406

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO-A-9306781	15-04-93	US-A- 5234457	10-08-93
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WO-A-9511055	27-04-95	US-A- 5445646	29-08-95
		WO-A- 9529647	09-11-95
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