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(74) Agents: KING, Joshua et al.; Graybeal Jackson Haley  
LLP, 155-108th Avenue, NE, Suite 350, Bellevue, WA  
98004-5973 (US).

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(71) Applicant (*for all designated States except US*):  
ECHO BIO LLC [US/US]; 579 Azalea Avenue NE,  
Bainbridge Island WA 98110-3930 (US).

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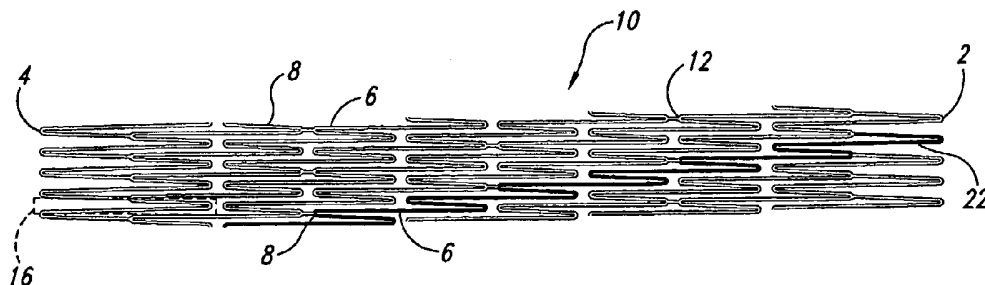
(72) Inventors; and

(75) Inventors/Applicants (*for US only*): PERRY, Kenneth, E., Jr. [US/US]; 579 Azalea Ave. NE, Bainbridge Island, WA 98110-3930 (US). LABOSSIERE, Paul, E. [US/US]; 579 Azalea Ave. NE, Bainbridge Island, WA 98110-3930 (US). PINCHOT, Gifford [US/US]; 579 Azalea Ave. NE, Bainbridge Island, WA 98110-3930 (US).

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(54) Title: SYSTEMS, APPARATUS AND METHODS RELATED TO HELICAL, NON-HELICAL OR REMOVABLE STENTS WITH RECTILINEAR ENDS



(57) Abstract: An intraluminal stent comprising a helical arrangement of elements defined by a successive series of substantially straight struts connected by apex sections alternately pointing in the opposite directions, wherein at least one apex section comprises two struts attached thereto with a length ratio about 1:2.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/34482

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61F 2/06 (2006.01)

USPC - 623/1.15

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)

USPC: 623/1, 12; 606/1, 108, 191, 194, 195, 198, 200

IPC(8): A61F 2/06, A61M 29/00 (2006.01)

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)

Science Direct\*, PubMed, Google Scholar, Google

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,925,061 A (OGI et al) 20 July 1999 (20.07.1999) entire document	1-8, 10, 12, 36-41 and 43
X	WO 00/42946 A1 (AL-SAADON) 27 July 2000 (27.07.2000) page 10, line 23; figure 4a; claim 45; parts 15, 22, 24	42, 45 and 47
A	US 6,342,067 B1 (MATHIS et al) 29 January 2002 (29.01.2002) entire document	1-8, 10-12, 36-43, 45-47
A	US 6,042,597 A (KVEEN et al) 28 March 2000 (28.03.2000) entire document	1-8, 10-12, 36-43, 45-47
A	US 5,646,160 A (MORRIS et al) 08 July 1997 (08.07.1997) entire document	1-8, 10-12, 36-43, 45-47
A	US 5,288,711 A (MITCHELL et al) 22 February 1994 (22.02.1994) entire document	1-8, 10-12, 36-43, 45-47
A	US 2004/0143318 A1 (TSENG et al) 22 July 2004 (22.07.2004) entire document	1-8, 10-12, 36-43, 45-47
A	US 2004/0093076 A1 (WHITE et al) 13 May 2004 (13.05.2004) entire document	1-8, 10-12, 36-43, 45-47
A	US 2004/0049263 A1 (PINCHASIK et al) 11 March 2004 (11.03.2004) entire document	1-8, 10-12, 36-43, 45-47
A	US 6,475,237 B2 (DRASLER et al) 05 November 2002 (05.11.2002) entire document	1-8, 10-12, 36-43, 45-47
A	US 6,423,091 B1 (HOJEIBANE et al) 23 July 2002 (23.07.2002) entire document	1-8, 10-12, 36-43, 45-47
A	US 2002/0055770 A1 (DORAN et al) 09 May 2002 (09.05.2002) entire document	1-8, 10-12, 36-43, 45-47

☐ 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 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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

14 February 2006

Date of mailing of the international search report

07 APR 2006

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents  
P.O. Box 1450, Alexandria, Virginia 22313-1450  
Facsimile No. 571-273-3201

Authorized officer:

Lee. W. Young

Telephone No. 571-272-7774

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/34482

## 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.:  
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.: 9, 13-35, 44, 48-70  
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:

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 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.