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- (71) Applicant: **BOSTON SCIENTIFIC SCIMED, INC.**  
[US/US]; One Scimed Place, Maple Grove, Minnesota  
55311 (US).
- (72) Inventors: **BIDNE, Ben**; 3565 County Road 12 N., Buf-  
falo, Minnesota 55313 (US). **TISCHLER, Brian**; 367 2nd  
Avenue S.E., New Brighton, Minnesota 55112 (US).
- (74) Agent: **ANDERSON, William**; 6640 Shady Oak Road,  
Suite 400, Eden Prairie, Minnesota 55344 (US).
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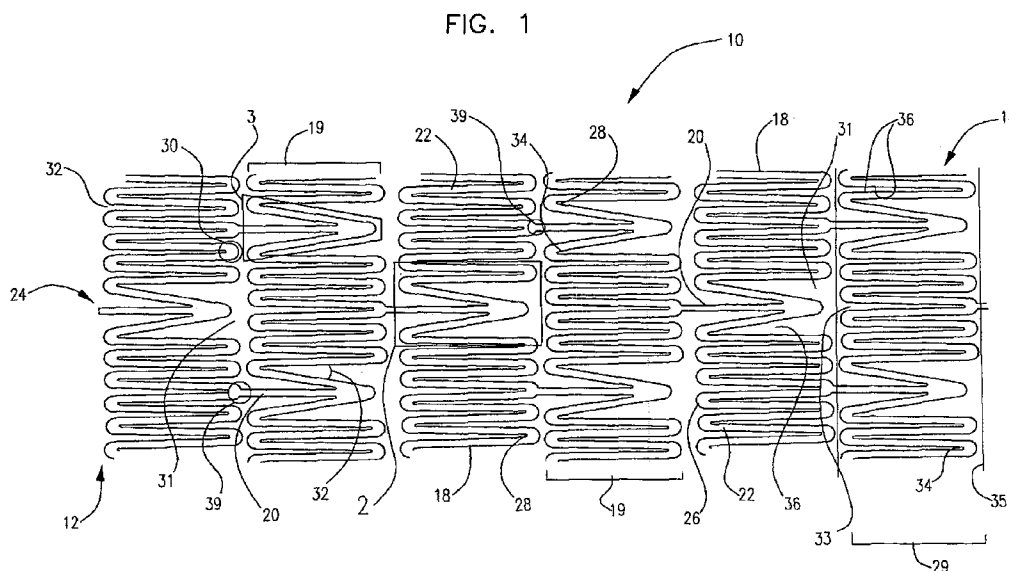
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(54) Title: STENT DESIGN WITH STRUTS OF VARIOUS ANGLES AND STIFFNESS



(57) Abstract: The present invention is directed to stent that has a plurality of axially spaced serpentine bands. Each serpentine band comprises a plurality of struts, wherein adjacent struts are connected to each other forming a plurality of peaks and valleys the plurality of struts comprise a plurality of adjacent pairs of struts, wherein each adjacent pair of struts comprises a first strut and a second strut and wherein the first and second struts have a first end, a second end and a length and a plurality of interconnecting struts axially connect the serpentine bands. The stent further includes a plurality of a connector nodes, wherein a plurality of first and second struts that are associated with a connector node have a greater stiffness than a plurality of struts that are not associated with a connector node.

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# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2008/001944

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. A61F2/90

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

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	WO 01/21095 A (ADVANCED STENT TECH INC [US]; DAVIDSON CHARLES J [US]; VARDI GIL M [US]) 29 March 2001 (2001-03-29)  page 7, line 26 - page 8, line 25 figures 4a,4b	1-3, 8-10,16, 29-31, 41-48
X	WO 01/15632 A (ADVANCED CARDIOVASCULAR SYSTEM [US]) 8 March 2001 (2001-03-08)  page 14, line 28 - page 16, line 17 figures 5,6	1-3,16, 32-40, 43,48
X	WO 2006/035669 A (NIPRO CORP [JP]; SANO YOSHIHIKO [JP]; TANAKA YUJI [JP]; EBARA YUKINORI) 6 April 2006 (2006-04-06)  abstract; figure 2	1-3, 8-10, 29-31, 43-48

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
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- \*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

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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

Espuch, Antonio

# INTERNATIONAL SEARCH REPORT

International application No.  
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## 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.: **49**  
because they relate to subject matter not required to be searched by this Authority, namely:  
**Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery**
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 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:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2.  As all searchable claims could be searched without effort justifying an 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.:  
**1-10, 16, 29-48**

### 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.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-10,16,29-48

A stent with serpentine bands connected by interconnecting struts, with connector nodes and pairs of struts, the pairs of struts connected to the nodes being stiffer than the ones that are not connected to the nodes.

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2. claims: 21-28,11-15,17-20

A stent with serpentine bands and pairs of struts that define two different opening angles in the as-cut state.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2008/001944
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Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
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			CA 2383297 A1	29-03-2001
			CN 1409622 A	09-04-2003
			EP 1229859 A2	14-08-2002
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