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Published:

— *with international search report (Art. 21(3))*

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(54) Title: STENT-GRAFT AND APPARATUS AND FITTING METHOD

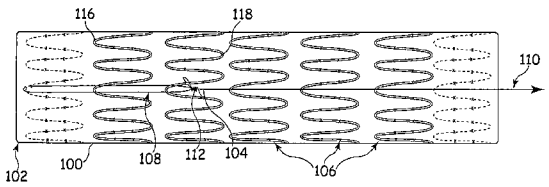


Figure 5

(57) Abstract: A stent-graft (100) is provided with a tightenable loop element (104) having a first end terminated in a slip knot or self-tightening knot (112) and a second end which is received in and can slide in the knot (112). The knot (112) is tied by a suture to the stent-graft (100) so as to be fixed thereto. The loop (104) is fitted to the stent-graft (100) in a manner as to pass between the inside to the outside of the graft material and in such a manner that controlled curvature of the stent-graft (100) is possible, in particular control of the overlapping of adjacent stents held within the zone of the loop (104). An introducer assembly is also disclosed which includes a control cannula (120) able to the fixed to the stent-graft (100) during the deployment procedure, as well as a mechanism of suture loops (150, 152) at the proximal end of the stent-graft (100) for retaining this in a constricted form during the process of curving the latter during the deployment process.

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/002098

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61F2/06 A61F2/84

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.
A	WO 03/034948 A (COOK INC [US]; COOK WILLIAM A AUSTRALIA [AU]) 1 May 2003 (2003-05-01) page 5, line 30 - page 9, line 2; figures 1-10	1-31
A	EP 0 897 699 A (SCHNEIDER USA INC [US]) 24 February 1999 (1999-02-24) paragraph [0047]; figure 10	1-31

☐ 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

"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	Date of mailing of the international search report
23 June 2009	20/10/2009

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Fax: (+31–70) 340–3016	Skorovs, Peteris

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/002098

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.:
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 reportcovers 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.:

see addtional sheet(s)

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: 1-31

An implantable medical device, comprising: a compressible and curvable structure; a loop of suture material, wherein the loop comprises a first end closed in a knot and a second end passing through the knot and is able to slide therein at least in a loop tightening direction, and wherein the loop is fitted to the device such that tightening of the loop causes the device to be curved.

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2. claims: 32,33

An implantable medical device, comprising: a compressible and curvable structure; at least one loop of suture material provided around a proximal end of the medical device, the loop having an operable length less than the diameter of the proximal end of the medical device, wherein the loop is adapted to constrict radially the proximal end of the medical device during deployment.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2009/002098

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 03034948 A	01-05-2003	AT 384492 T	15-02-2008
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