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(54) Title: COATED TUBULAR SUPPORT MEMBERS AND METHODS OF MANUFACTURING SAME

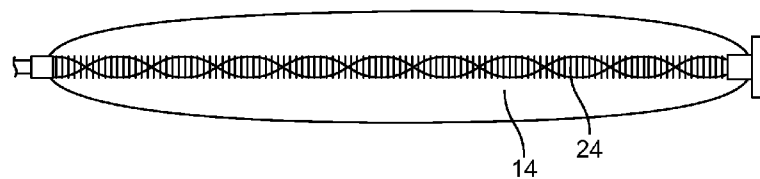
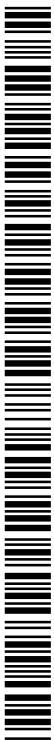


FIG. 3A

(57) Abstract: A tubular support member located in a distal portion of an elongate flexible medical device is provided with a plurality of wall openings, e.g., axially-spaced, substantially transverse slots, formed therein to thereby increase a flexibility of the support member. A layer of sealing material overlays an outer surface the support member so as to provide a sealed portion of the support member including the wall openings, the sealing material having respective flexible invaginations formed therein overlaying the wall openings in the support member so that the sealing material does not substantially impede flexibility of the support member.



INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. A61M25/00 A61M25/01 B29L31/00 A61M25/09 B29C49/00
ADD.
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)
A61M
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)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006/074372 A1 (HAGA YOICHI [JP] ET AL) 6 April 2006 (2006-04-06) paragraphs [0028], [0030] - [0035]	1-8,25, 26
Y	----- US 8 409 169 B1 (MOSS GERALD [US]) 2 April 2013 (2013-04-02) column 20, lines 24-67; figures 9a-9b, 10c page 21 page 22, lines 1-19	16
X	----- WO 2014/077881 A1 (HOLLISTER INC [US]) 22 May 2014 (2014-05-22) page 9, lines 11-26; figure 16	1,2,4-6, 8,25,26
X	----- US 5 357 979 A (IMRAN MIR A [US]) 25 October 1994 (1994-10-25) column 4, lines 62-68; figure 1 column 5, lines 1-11 ----- -/--	1,2,4-6, 8,25,26

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	"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
"E" earlier application or patent but published on or after the international filing date	"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
"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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 11 March 2016	Date of mailing of the international search report 18/03/2016
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Bielsa, David
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INTERNATIONAL SEARCH REPORT

International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 506 196 B1 (LAUFER MICHAEL D [US]) 14 January 2003 (2003-01-14) column 4, lines 60-67; figure 11 column 5 column 6, lines 1-15 -----	1-16,25, 26
X	EP 0 422 887 A2 (MACHIDA ENDOSCOPE CO LTD [JP]) 17 April 1991 (1991-04-17) column 4, lines 6-14; figures 1,2,3,4,7 column 6, line 1 column 7, lines 1-7,41-50 column 8, lines 1-10 -----	17,18,20
X	GB 2 319 183 A (SMITHS INDUSTRIES PLC [GB]) 20 May 1998 (1998-05-20) pages 5,6; figure 2 -----	17-24
A	EP 0 920 881 A2 (SMITHS INDUSTRIES PLC [GB]) 9 June 1999 (1999-06-09) paragraphs [0012] - [0015]; figure 5 -----	1-26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2015/040524

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 all searchable 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.:

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: 1-16, 25, 26

An elongate flexible medical device and method of manufacturing thereof, comprising:
a support member comprising a tubular wall having a plurality of wall openings formed therein; and
a layer of sealing material overlying an outer surface of the support member, the layer of sealing material comprising respective flexible invaginations formed therein overlying respective wall openings in the tubular wall.

2. claims: 17-24

An elongate flexible medical device and method of manufacturing thereof, comprising:
a support member comprising a tubular wall having a plurality of wall openings formed therein; and
a layer of sealing material underlying an outer surface of the support member, the layer of sealing material comprising respective flexible invaginations formed therein underlying respective wall openings in the tubular wall.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2015/040524

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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