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(54) Title: SYSTEMS, DEVICES AND METHODS FOR ACCESSING A BODILY OPENING

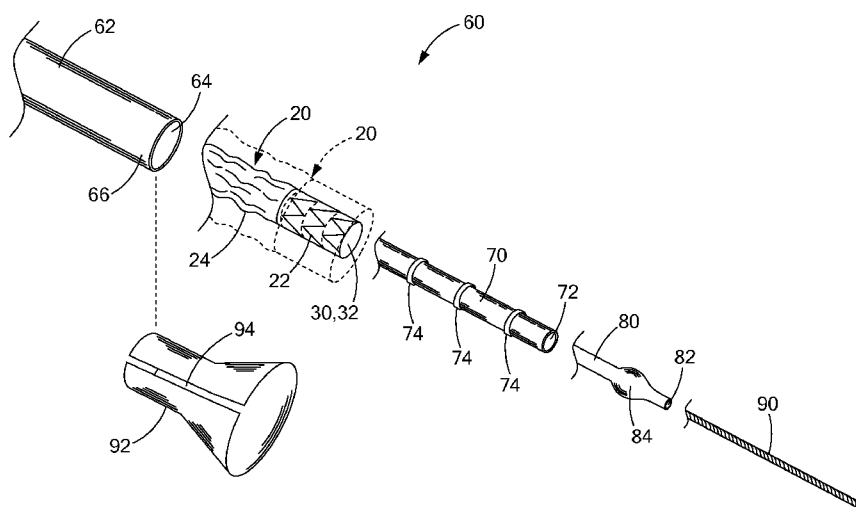


FIG. 9

(57) Abstract: Medical systems, devices and methods are provided for accessing a bodily opening that, among other things, are safe and reliable, and facilitate manipulation of a medical instrument (100). The medical access device (20) generally includes an elongated flexible sheath (24) and an expandable frame (22) connected to the distal end of the flexible sheath. The sheath and expandable frame are operable between expanded and collapsed configurations to provide a pathway from a natural orifice to the bodily opening. Medical systems and methods are also provided for delivering the medical device.



INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/044143

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61B17/34

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)
A61B

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	US 6 652 492 B1 (BELL PAUL [US] ET AL) 25 November 2003 (2003-11-25)	1-4, 7-9
Y	figures 1,4,27 column 5, line 27 - column 6, line 8 column 10, line 18 - column 11, line 10 column 13, lines 27-54	5
Y	WO 2006/029370 A (ONSET MEDICAL CORP [US]; KICK GEORGE F [US]; LENKER JAY [US]; NANCE ED) 16 March 2006 (2006-03-16) figure 15	5
X	US 2003/093104 A1 (BONNER MATTHEW D [US] ET AL) 15 May 2003 (2003-05-15) paragraphs [0044] - [0047]; figures 1-4	1, 7, 8
	----- -/-	

☒ 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.
- *G* document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/044143

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.: **14-16**
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 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.:

1-9

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.

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2009/044143

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 197 971 A (BONUTTI PETER M [US]) 30 March 1993 (1993-03-30) figure 10 column 8, line 16 - column 9, line 33 -----	1-4, 6-8
X	WO 2005/023358 A (ACUMEN MEDICAL INC [US]; EVERSULL CHRISTIAN S [US]; MOURLAS NICHOLAS J) 17 March 2005 (2005-03-17) figures 1A, 1B, 11A-11F page 8, line 6 - page 9, line 29 page 11, lines 4-31 page 12, lines 12-17 page 17, lines 1-27 -----	1-4, 6-8
X	US 2008/039786 A1 (EPSTEIN SAMUEL J [US] ET AL) 14 February 2008 (2008-02-14) figures 7A, 7B, 8A, 8B paragraphs [0006] - [0010] paragraphs [0034] - [0036] -----	1-4, 6-8
A	US 2005/056292 A1 (COOPER JOEL D [US]) 17 March 2005 (2005-03-17) the whole document -----	1-9

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2009/044143

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6652492	B1	25-11-2003	NONE
WO 2006029370	A	16-03-2006	EP 1804860 A2 11-07-2007 JP 2008512212 T 24-04-2008
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WO 2005023358	A	17-03-2005	NONE
US 2008039786	A1	14-02-2008	CA 2660070 A1 21-02-2008 EP 2054117 A2 06-05-2009 JP 2010500109 T 07-01-2010 WO 2008021011 A2 21-02-2008
US 2005056292	A1	17-03-2005	US 2006116749 A1 01-06-2006

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-9

A medical device comprising an expandable frame and a flexible sheath connected to the expandable frame, the sheath collapsible over a portion of its length and operable between a collapsed and an expanded configuration.

2. claims: 10-13

A medical system comprising an outer catheter, a medical device having a connection member and a flexible sheath, the sheath operable between a collapsed and an expanded configuration, and an inner catheter having a plurality of gripping members positioned on the outer periphery of the inner catheter for gripping the sheath.
