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Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

[Continued on next page]

(54) Title: PARTIALLY DISPOSABLE ENDOSCOPIC DEVICE

(57) Abstract: An endoscopic device having a one-handed, either-handed steering mechanism is presented. The endoscopic device includes some components that are sterile and used on only a single patient. The single-use components are medically disposed of after exposure to a non-sterile environment such as an internal body cavity of a patient. The endoscopic device also includes some reusable components that are not exposed to a non-sterile environment.

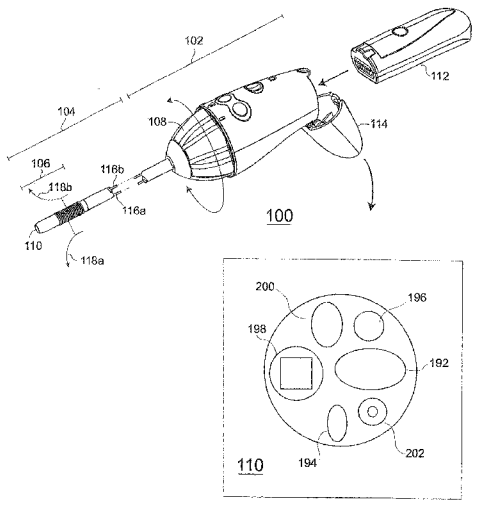


FIG. 4

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Published:

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

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:
4 December 2014

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2014/022124

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61B1/00
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)
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 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	DE 10 2010 053814 A1 (FRIEDRICH MARKUS [DE]) 14 June 2012 (2012-06-14)	1-3,5
Y	the whole document	4,6-10

X	US 2008/249355 A1 (BIRNKRANT DASHIELL [US] ET AL) 9 October 2008 (2008-10-09)	1,3,5-9
Y	paragraphs [0009] - [0057]; figures 1-13	5-10

X	US 7 946 981 B1 (CUBB ANTHONY [US]) 24 May 2011 (2011-05-24)	1-3
Y	column 6, line 25 - column 8, line 41	5,6,10

X	US 3 598 113 A (MOORE WILLIAM C ET AL) 10 August 1971 (1971-08-10)	1
Y	the whole document	4

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[X] Further documents are listed in the continuation of Box C.

[X] 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

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
1 October 2014	14/10/2014

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	Rivera Pons, Carlos

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Form PCT/ISA/210 (second sheet) (April 2005)

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2012/173082 A1 (OLYMPUS MEDICAL SYSTEMS CORP [JP]; MIYOSHI HIROAKI [JP]; ISHIZAKI RYOS) 20 December 2012 (2012-12-20) the whole document	16-20
X,P	& US 2013/190566 A1 (MIYOSHI HIROAKI [JP] ET AL) 25 July 2013 (2013-07-25) paragraphs [0029] - [0059]; figures 5-8	16-20
X	US 5 704 898 A (KOKISH ARKADY [US]) 6 January 1998 (1998-01-06) columns 7,8; figure 8	16-20
X	US 5 551 945 A (YABE HISAO [JP] ET AL) 3 September 1996 (1996-09-03) columns 11,12; figure 8	16-20
X	EP 2 438 954 A1 (GREATBATCH LTD [US]) 11 April 2012 (2012-04-11) paragraphs [0010] - [0042]; figure 1	16,17,20

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2014/022124

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. [X] Claims Nos.: 11-15
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 surgeryClaims 11-15 comprise the step of performing a medical procedure that includes passing the sterile disposable flexible tubular member into the patient's body and controlling the flexible tubular member.

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. [X] 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.

[X] 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: 1-15

An endoscopic device, comprising: a disposable control handle having a sealable recess therein; a disposable flexible tubular member coupled to the control handle; and a non-disposable electronics control module configured for removable placement within the sealable recess. Corresponding method of use.

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2. claims: 16-20

An endoscopic device, comprising: a control handle configured for single-handed, either-handed operation; and a steering mechanism cooperatively assembled with the control handle, the steering mechanism arranged to steer at least one portion of a flexible tubular member attachable to the steering mechanism.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2014/022124

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 102010053814 A1	14-06-2012	DE 102010053814 A1	14-06-2012
		EP 2648598 A1	16-10-2013
		US 2013345503 A1	26-12-2013
		WO 2012075989 A1	14-06-2012
US 2008249355 A1	09-10-2008	NONE	
US 7946981 B1	24-05-2011	NONE	
US 3598113 A	10-08-1971	DE 1937817 A1	02-04-1970
		DE 6929423 U	05-07-1973
		GB 1229690 A	28-04-1971
		US 3598113 A	10-08-1971
WO 2012173082 A1	20-12-2012	CN 103619230 A	05-03-2014
		EP 2702923 A1	05-03-2014
		JP 5395282 B2	22-01-2014
		US 2013190566 A1	25-07-2013
		WO 2012173082 A1	20-12-2012
US 5704898 A	06-01-1998	US 5704898 A	06-01-1998
		WO 9718746 A2	29-05-1997
US 5551945 A	03-09-1996	US 5551945 A	03-09-1996
		US 5993380 A	30-11-1999
EP 2438954 A1	11-04-2012	EP 2438954 A1	11-04-2012
		US 2012089125 A1	12-04-2012