

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference END8328WOPC1	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/IB2018/057298	International filing date (<i>day/month/year</i>) 21 September 2018 (21-09-2018)	(Earliest) Priority Date (<i>day/month/year</i>) 27 September 2017 (27-09-2017)
Applicant ETHICON LLC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 6 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- the international application in the language in which it was filed
- a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box No. II)

3. **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- the text is approved as submitted by the applicant
- the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant
- the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 16
 - as suggested by the applicant
 - as selected by this Authority, because the applicant failed to suggest a figure
 - as selected by this Authority, because this figure better characterizes the invention
- b. none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2018/057298

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61B17/115
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 Y	EP 2 086 423 A2 (ETHICON ENDO SURGERY INC [US]) 12 August 2009 (2009-08-12) para. 113-123; figures 79-94 -----	1-4, 17-20 13-16
X Y	EP 3 108 823 A2 (ETHICON ENDO-SURGERY LLC [PR]) 28 December 2016 (2016-12-28) para. 92-96; figures 31-32B -----	1-4, 17-20 5-16
A	EP 2 517 650 A2 (TYCO HEALTHCARE [US]) 31 October 2012 (2012-10-31) para. 20-45; figures 1-12 -----	1-20
Y	EP 2 128 021 A1 (EUROCOPTER FRANCE [FR]) 2 December 2009 (2009-12-02) figures 2-3 -----	5-10
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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 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 20 December 2018	Date of mailing of the international search report 08/01/2019
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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 Kamp, Martin
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International application No
PCT/IB2018/057298

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 10 2007 051263 A1 (HARTING ELECTRONICS GMBH & CO [DE]) 30 April 2009 (2009-04-30) figures 1a-4c -----	5,10-12
Y	WO 2015/077139 A1 (ETHICON ENDO SURGERY INC [US]) 28 May 2015 (2015-05-28) figures 11A, 11B, 22A-22C -----	5,10-16

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2018/057298

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
EP 2086423	A2	12-08-2009	AT 470395 T	15-06-2010
			CN 101534720 A	16-09-2009
			CN 101534721 A	16-09-2009
			CN 101534722 A	16-09-2009
			CN 101534723 A	16-09-2009
			CN 101534724 A	16-09-2009
			CN 101534725 A	16-09-2009
			CN 101534728 A	16-09-2009
			CN 101541251 A	23-09-2009
			CN 101541252 A	23-09-2009
			CN 101636114 A	27-01-2010
			EP 2076184 A1	08-07-2009
			EP 2076185 A1	08-07-2009
			EP 2079371 A1	22-07-2009
			EP 2079372 A1	22-07-2009
			EP 2083708 A1	05-08-2009
			EP 2083709 A2	05-08-2009
			EP 2083710 A1	05-08-2009
			EP 2086423 A2	12-08-2009
			EP 2086424 A1	12-08-2009
			EP 2091444 A1	26-08-2009
			EP 2394587 A2	14-12-2011
			EP 2444008 A2	25-04-2012
			EP 2997905 A1	23-03-2016
			JP 4959802 B2	27-06-2012
			JP 5172846 B2	27-03-2013
			JP 5179500 B2	10-04-2013
			JP 5179501 B2	10-04-2013
			JP 5184537 B2	17-04-2013
			JP 5198454 B2	15-05-2013
			JP 5203374 B2	05-06-2013
			JP 5290182 B2	18-09-2013
			JP 5335678 B2	06-11-2013
			JP 5405309 B2	05-02-2014
			JP 2010504806 A	18-02-2010
			JP 2010504807 A	18-02-2010
			JP 2010504808 A	18-02-2010
			JP 2010504809 A	18-02-2010
			JP 2010504812 A	18-02-2010
			JP 2010504813 A	18-02-2010
			JP 2010504814 A	18-02-2010
			JP 2010504815 A	18-02-2010
			JP 2010504846 A	18-02-2010
			JP 2010506604 A	04-03-2010
			US 2008078800 A1	03-04-2008
			US 2008078801 A1	03-04-2008
			US 2008078802 A1	03-04-2008
			US 2008078803 A1	03-04-2008
			US 2008078804 A1	03-04-2008
			US 2008078805 A1	03-04-2008
			US 2008078806 A1	03-04-2008
			US 2008078807 A1	03-04-2008
			US 2008078808 A1	03-04-2008
			US 2008082115 A1	03-04-2008
			US 2008082124 A1	03-04-2008
			US 2008082125 A1	03-04-2008
			US 2008082126 A1	03-04-2008
			US 2011060363 A1	10-03-2011

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2018/057298

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		US 2012234897 A1	20-09-2012
		US 2012248172 A1	04-10-2012
		US 2012298722 A1	29-11-2012
		US 2013079814 A1	28-03-2013
		US 2013175321 A1	11-07-2013
		US 2013181030 A1	18-07-2013
		US 2013233906 A1	12-09-2013
		US 2014166722 A1	19-06-2014
		US 2014175154 A1	26-06-2014
		US 2014175155 A1	26-06-2014
		US 2014197223 A1	17-07-2014
		US 2014263571 A1	18-09-2014
		US 2015090763 A1	02-04-2015
		US 2016354085 A1	08-12-2016
		US 2017007248 A1	12-01-2017
		WO 2008039237 A1	03-04-2008
		WO 2008039238 A1	03-04-2008
		WO 2008039249 A1	03-04-2008
		WO 2008039250 A1	03-04-2008
		WO 2008039270 A1	03-04-2008
		WO 2008042043 A1	10-04-2008
		WO 2008042044 A2	10-04-2008
		WO 2008042045 A2	10-04-2008
		WO 2008094210 A1	07-08-2008
		WO 2009038550 A1	26-03-2009

EP 3108823	A2	28-12-2016	
		BR 112017028129 A2	28-08-2018
		CN 107809968 A	16-03-2018
		EP 3108823 A2	28-12-2016
		JP 2018519065 A	19-07-2018
		US 2016374681 A1	29-12-2016
		WO 2016210073 A2	29-12-2016

EP 2517650	A2	31-10-2012	
		AU 2012201688 A1	15-11-2012
		AU 2014202901 A1	19-06-2014
		AU 2015246124 A1	12-11-2015
		CA 2772423 A1	29-10-2012
		CN 102755180 A	31-10-2012
		CN 106108967 A	16-11-2016
		EP 2517650 A2	31-10-2012
		EP 3158951 A1	26-04-2017
		ES 2616211 T3	09-06-2017
		JP 6045172 B2	14-12-2016
		JP 6326476 B2	16-05-2018
		JP 2012232110 A	29-11-2012
		JP 2017029817 A	09-02-2017
		US 2012273545 A1	01-11-2012
		US 2013299553 A1	14-11-2013
		US 2013299554 A1	14-11-2013

EP 2128021	A1	02-12-2009	
		AT 495973 T	15-02-2011
		EP 2128021 A1	02-12-2009
		FR 2931131 A1	20-11-2009
		US 2009283642 A1	19-11-2009

DE 102007051263	A1	30-04-2009	NONE

WO 2015077139	A1	28-05-2015	CN 106163430 A 23-11-2016

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2018/057298

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		EP 3071127 A1	28-09-2016
		JP 2017508482 A	30-03-2017
		US 2015148829 A1	28-05-2015
		WO 2015077139 A1	28-05-2015
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