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HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN,
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(54) Title: DEVICES AND METHODS FOR APPLYING A HEMOSTATIC CLIP ASSEMBLY

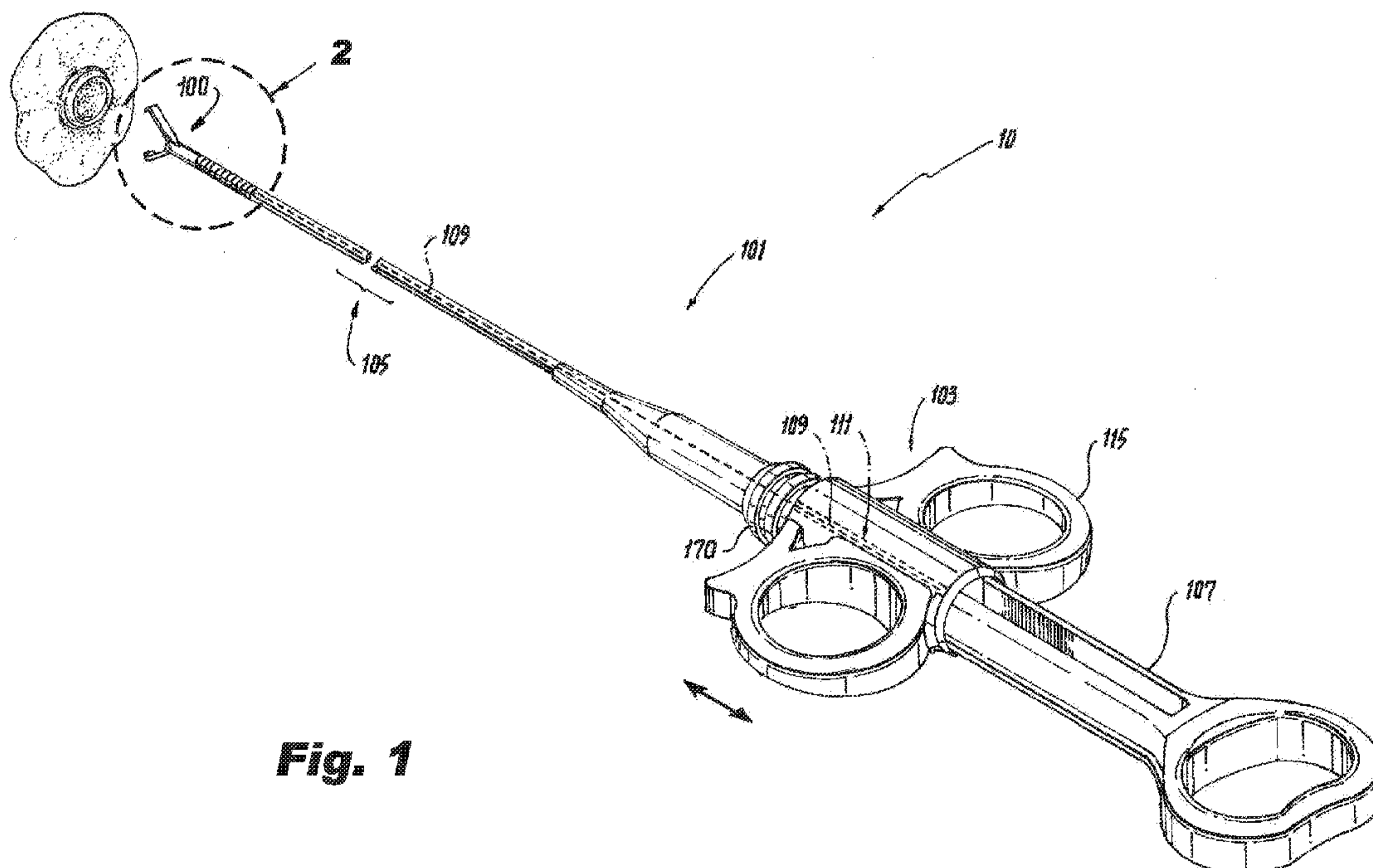


Fig. 1

(57) Abstract: A device for applying a hemostatic clip assembly includes a proximal delivery catheter having a handle assembly and an elongated catheter body defining a longitudinal axis extending distally from the handle assembly, and a distal clip assembly removably connected to a distal end of the catheter body. The distal clip assembly includes a distal clip housing, a jaw assembly and a jaw adapter yoke. The jaw assembly has a pair of jaw members fixed to the distal clip housing by a first pin oriented orthogonally relative to the longitudinal axis. The jaw adapter yoke is operatively connected to the jaw members. The proximal delivery catheter is configured to transmit linear motion along and torsion about the longitudinal axis to at least a portion of the distal clip assembly. At least one of the jaw members is configured to rotate about the first pin between an open and a closed configuration.



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INTERNATIONAL SEARCH REPORT

International application No PCT/US2020/058553

A. CLASSIFICATION OF SUBJECT MATTER
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 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 A	US 2010/268254 A1 (GOLDEN JOE ALAN [US] ET AL) 21 October 2010 (2010-10-21) abstract; figures 1a, 8d, 12, 13 paragraphs [0019], [0052] - [0054], [0084], [0107]	1-6, 39-44 7,8, 45-47
X	----- CN 110 141 295 A (ZHANG QIANG) 20 August 2019 (2019-08-20) abstract; figures 1, 2,7, 15,19 paragraphs [0008], [0079], [0081], [0082], [0109] ----- -/--	1-8, 39-47

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
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- "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
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- "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

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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.
X A	US 5 626 607 A (MALECKI WILLIAM W [US] ET AL) 6 May 1997 (1997-05-06) abstract; figures 17,18,19, 22 column 7, line 54 - line 57 column 15, line 35 column 15, line 46 - line 48 column 15, line 55 - line 57 column 16, line 1 - line 7 -----	1,2,39, 40 3-8, 41-47
X A	EP 3 476 307 A1 (ETHICON LLC [PR]) 1 May 2019 (2019-05-01) abstract; figures 1,2,20,21,78, 79 paragraphs [0061], [0143], [0159] -----	1,2,39, 40 3-8, 41-47
A	CN 107 684 448 A (SUZHOU LANTEX MEDICAL TECH CO LTD) 13 February 2018 (2018-02-13) abstract; figure 6 -----	1-8, 39-47
A	WO 2015/176361 A1 (MICO TECH NANJING CO LTD [CN]) 26 November 2015 (2015-11-26) abstract; figures 4,5 -----	1-8, 39-47

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2020/058553

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.: **35-38**
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210
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.:
1-8, 39-47

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

Continuation of Box II.1

Claims Nos.: 35-38

Claims 35 to 38 relate to a method for treatment of the human or animal body by surgery, practised on the human or animal body (Rule 39.1 (iv) PCT). Consequently, no opinion will be formulated with respect to the novelty, inventive step and industrial applicability of the subject-matter of these claims (Article 17(2)(a)(i) PCT).

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-8, 39-47

A device for applying a hemostatic clip assembly, the device comprising a distal clip assembly removably connected to a distal end of the elongated catheter body, the distal clip assembly including a distal clip housing, a jaw assembly having a pair of cooperating jaw members fixed to the distal clip housing by a first pin, the first pin oriented orthogonally relative to the longitudinal axis, and a jaw adapter yoke operatively connected to the jaw members, wherein the proximal delivery catheter is configured and adapted to transmit linear motion along the longitudinal axis and torsion about the longitudinal axis to at least a portion of the distal clip assembly, wherein at least one of the jaw members is configured and adapted to rotate about the first pin between an open configuration and a closed configuration.

2. claims: 9-34

A device for applying a hemostatic clip assembly, the device comprising a proximal delivery catheter including a proximal handle assembly and an elongated catheter body extending distally from the proximal handle assembly, a spring tube positioned at a distal end of the elongated catheter body, a drive wire movably positioned within the elongated catheter body, and a spring release coupled to a distal end of the drive wire, the elongated catheter body defining a longitudinal axis, wherein the spring tube includes an inwardly extending flange portion and the spring release includes an outwardly extending flange portion configured and adapted to interact with the inwardly extending flange portion of the spring tube.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2020/058553

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