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(54) Title: APPLICATOR FOR SURGICAL STAPLER BUTTRESS

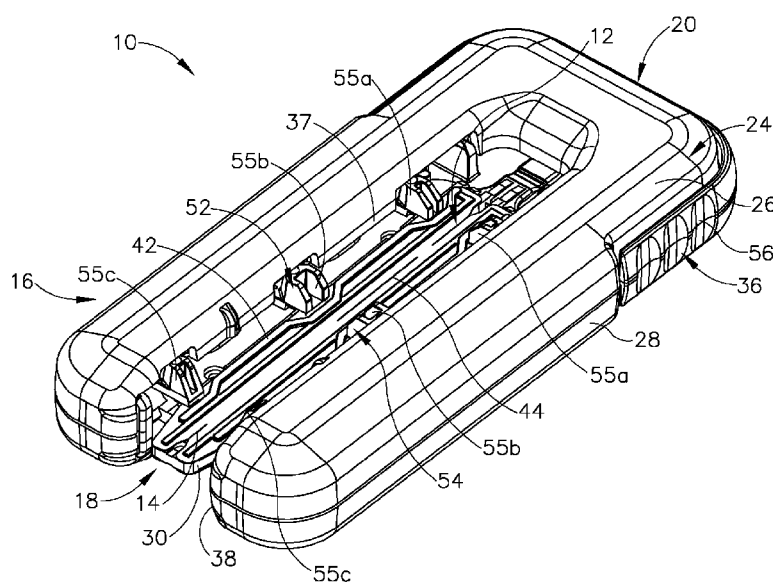


Fig. 1

(57) Abstract: A buttress applier cartridge assembly includes a buttress assembly and a buttress applier cartridge. The buttress assembly includes a buttress configured to support a staple formed therein as well as an adhesive layer for adhering to an end effector. The buttress applier cartridge includes a housing defining a gap extending in a longitudinal direction as well as a platform. The platform extends longitudinally from a proximal portion to a distal portion and is exposed in a transverse direction adjacent to the gap. The proximal and distal portions respectively have a proximal stiffness and a different, distal stiffness in the transverse direction. Thereby, the proximal and distal portions support the buttress assembly thereon to deform with the proximal and distal stiffnesses and provide reactionary forces of at least the predetermined minimum force while receiving the end effector for accommodating various camber orientations of the end effector.



OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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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))*

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:

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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2019/060821

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61B17/072
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	US 2017/055981 A1 (VENDELY MICHAEL J [US] ET AL) 2 March 2017 (2017-03-02) paragraphs [0384], [0390] -----	1-12
X	EP 3 143 947 A2 (ETHICON ENDO-SURGERY LLC [PR]) 22 March 2017 (2017-03-22) paragraphs [0049], [0065] -----	1-12



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

16 March 2020

Date of mailing of the international search report

23/06/2020

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2019/060821

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2017055981 A1	02-03-2017	US 2017055981 A1	02-03-2017
		US 2019150918 A1	23-05-2019
		US 2019167262 A1	06-06-2019
		US 2019167263 A1	06-06-2019
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		CN 108135612 A	08-06-2018
		EP 3143947 A2	22-03-2017
		JP 2018525137 A	06-09-2018
		US 2017056017 A1	02-03-2017
		WO 2017035211 A2	02-03-2017

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2019/060821

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.:

1-12

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: 1-12

A buttress applier cartridge assembly directed to a special chassis with a rigid web portion for facilitating interaction with the end effector.

2. claim: 13

A buttress applier cartridge assembly having a chassis directed to a rigid web portion for enhancing interaction with the end effector.

3. claims: 14-20

A buttress applier cartridge assembly having an actuator sled for facilitating retention of buttress assembly on the platform.
