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14/871,153 30 September 2015 (30.09.2015) US
- (71) **Applicant:** **ETHICON ENDO-SURGERY, LLC** [US/US]; #475 Street C, Los Frailes Industrial Park, Guaynabo, PUERTO RICO 00969 (US).
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- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, 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.
- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

[Continued on next page]

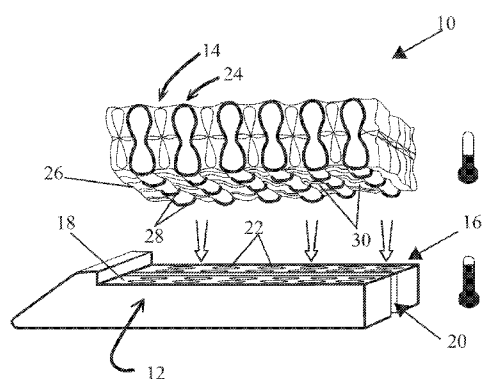
(54) **Title:** COMPRESSIBLE ADJUNCT WITH ATTACHMENT REGIONS

FIG. 6

(57) **Abstract:** A compressible adjunct is used with a surgical instrument including a staple cartridge deck. The compressible adjunct includes a first biocompatible material, a second biocompatible material with a lower melting temperature than the first biocompatible material, and a body including a face positionable against a length of the staple cartridge deck. The face includes a plurality of attachment regions spaced apart from one another, wherein the plurality of attachment regions include the second biocompatible material, wherein the face is selectively attachable to the staple cartridge deck at said plurality of attachment regions, and a plurality of non-attachment regions extending between the plurality of attachment regions, wherein the second biocompatible material is selectively disposed outside said non-attachment regions.

**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))
- 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))

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

INV. A61B17/072 A61B17/064
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.
E	EP 3 072 458 A2 (ETHICON ENDO SURGERY LLC [PR]) 28 September 2016 (2016-09-28) paragraph [0088] paragraph [0091] - paragraph [0095]; figures 22, 27, 29	1-10, 13, 14
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X	----- EP 2 737 861 A1 (COVIDIEN LP [US]) 4 June 2014 (2014-06-04) paragraph [0042] - paragraph [0047]; figures	1-5
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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

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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X	US 2013/068820 A1 (MILLER MATTHEW C [US] ET AL) 21 March 2013 (2013-03-21)	1-5
Y	paragraph [0028] - paragraph [0033];	17,18
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2016/052815

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2016/052815

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.:

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: 1-14

A staple cartridge assembly for use with a surgical stapling instrument, wherein said staple cartridge assembly comprises: a staple cartridge, comprising: a plurality of staples; and a cartridge deck comprising an outer surface; and a fibrous construct, comprising: a body comprising a first plurality of fibers comprised of a first biocompatible material having a first melting temperature; and a face positioned against said outer surface of said cartridge deck, wherein said face comprises: a plurality of attachment regions spaced apart from one another, wherein each of said plurality of attachment regions comprises a second plurality of fibers comprised of a second biocompatible material having a second melting temperature lower than said first melting temperature; and a plurality of non-attachment regions extending between said plurality of attachment regions, wherein said non-attachment regions exclude said second plurality of fibers, and wherein said face is selectively attached to said outer surface at said plurality of attachment regions by temporarily heating said face to a temperature greater than or equal to said second melting temperature but less than said first melting temperature.

2. claims: 15-19

A staple cartridge assembly for use with a surgical stapling instrument, wherein said staple cartridge assembly comprises: a staple cartridge, comprising: a plurality of staples; and a cartridge deck, comprising: an outer surface comprising a plurality of attachment zones spaced apart from one another; and a plurality of bonding islands, wherein each of said plurality of bonding islands is disposed within one of said attachment zones, and wherein each of said plurality of bonding islands is comprised of a first biocompatible material; and a compressible layer positioned against said cartridge deck, wherein said compressible layer is comprised of a second biocompatible material different from said first biocompatible material, and wherein said compressible layer is secured to said cartridge deck by a temporary phase transition in said first biocompatible material.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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