



(51) International Patent Classification:
A61B 17/072 (2006.01)

(21) International Application Number:
PCT/US2013/031423

(22) International Filing Date:
14 March 2013 (14.03.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
13/429,647 26 March 2012 (26.03.2012) US

(71) Applicant: ETHICON ENDO-SURGERY, INC.
[US/US]; 4545 Creek Road, Cincinnati, Ohio 45242 (US).

(72) Inventors: LEIMBACH, Richard, L.; 2901 Markbreit Avenue, Cincinnati, Ohio 45209 (US). SETSER, Michael, E.; 2538 Flagstone Court, Burlington, Kentucky 41005 (US).

(74) Agents: JOHNSON, Philip, S. et al.; Johnson & Johnson, One Johnson & Johnson Plaza, New Brunswick, New Jersey 08933 (US).

(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, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, 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, 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, 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, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- 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:
13 March 2014

(54) Title: SURGICAL STAPLING DEVICE WITH LOCKOUT SYSTEM FOR PREVENTING ACTUATION IN THE ABSENCE OF AN INSTALLED STAPLE CARTRIDGE

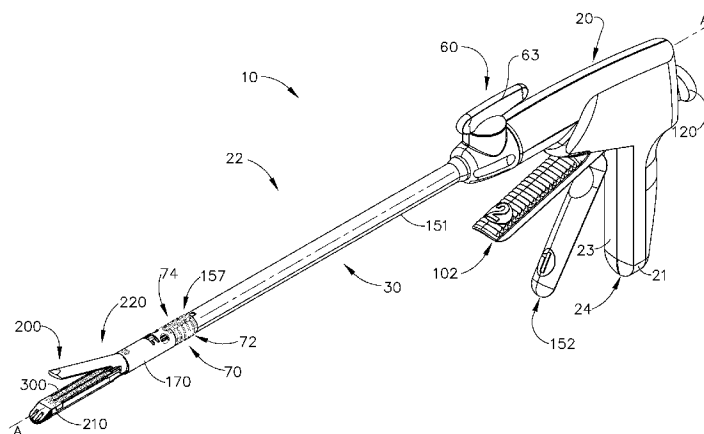


FIG. 1

(57) Abstract: Surgical stapling instruments surgical stapling cartridges are disclosed. At least one embodiment includes an end effector that has an elongate channel that is configured to operably support a surgical staple cartridge therein and an anvil that is movably supported on the elongate channel between an open position and closed positions in response to an application of opening and closing motions applied thereto. An anvil lock member (260, 400) cooperates with the anvil to retain the anvil in an open position when a staple cartridge has not been installed in the elongate channel and prevent the anvil from moving to a closed position until the staple cartridge has been seated within the elongate channel. Surgical staple cartridges are configured to move the anvil from an open position to an actuatable position when the cartridge has been installed in the end effector.



INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/031423

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 Y	US 5 584 425 A (SAVAGE ROBERT C [US] ET AL) 17 December 1996 (1996-12-17) figures 37-53	1,11, 17-19 2,3,8, 10,12
X	----- US 5 636 780 A (GREEN DAVID T [US] ET AL) 10 June 1997 (1997-06-10) figures 1,15 column 11, paragraph 4	1,11,19
Y	----- US 2007/084896 A1 (DOLL KEVIN [US] ET AL DOLL KEVIN R [US] ET AL) 19 April 2007 (2007-04-19) figures 35-37	2,3,8, 10,12
	----- -/--	

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 7 January 2014	Date of mailing of the international search report 17/01/2014
---	--

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 Schießl, Werner
--	---

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/031423

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 752 644 A (BOLANOS HENRY [US] ET AL) 19 May 1998 (1998-05-19) figures 21,22 column 8, line 29 - column 9, line 3 -----	19,20
X	US 2009/261143 A1 (WIXEY MATTHEW A [US] ET AL) 22 October 2009 (2009-10-22) figures 34-39 -----	19

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/031423

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: 1-19

A surgical stapling instrument wherein the anvil mounting portion is pivotally supported on the elongate channel (see claim 2) or comprises a pair of opposed anvil trunnions movably received in corresponding trunnion slots of the elongate channel (see claim 12) in order to provide an improved guidance of the anvil when moved from the open to the closed position

2. claim: 20

A surgical staple cartridge wherein the cartridge body comprises a pair of wedge-shaped pivot members each defining a sloped pivot surface for contacting the anvil (claim 20) in order to provide an alternative clamp lock out where the cartridge moves the anvil instead of an anvil lock member

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2013/031423

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5584425	A	17-12-1996	CA 2119524 A1 23-09-1994
			DE 69406343 D1 27-11-1997
			DE 69406343 T2 19-03-1998
			EP 0621006 A1 26-10-1994
			ES 2108319 T3 16-12-1997
			US 5397046 A 14-03-1995
			US 5472132 A 05-12-1995
			US 5584425 A 17-12-1996

US 5636780	A	10-06-1997	AU 657364 B2 09-03-1995
			CA 2080160 A1 19-04-1993
			DE 552423 T1 25-11-1993
			DE 69223937 D1 12-02-1998
			DE 69223937 T2 28-05-1998
			EP 0552423 A2 28-07-1993
			ES 2042445 T1 16-12-1993
			JP 3332965 B2 07-10-2002
			JP H05200038 A 10-08-1993
			US 5636780 A 10-06-1997

US 2007084896	A1	19-04-2007	AT 400221 T 15-07-2008
			AU 2004202201 A1 09-12-2004
			AU 2007216766 A1 17-04-2008
			AU 2010202270 A1 24-06-2010
			BR PI0703691 A 27-05-2008
			CA 2467881 A1 20-11-2004
			CA 2605353 A1 03-04-2008
			CN 101268954 A 24-09-2008
			EP 1479348 A1 24-11-2004
			EP 1908416 A1 09-04-2008
			ES 2309464 T3 16-12-2008
			JP 4703977 B2 15-06-2011
			JP 2004344659 A 09-12-2004
			KR 20080031127 A 08-04-2008
			MX PA04004883 A 25-11-2004
			SG 141407 A1 28-04-2008
			US 2004232195 A1 25-11-2004
			US 2007084896 A1 19-04-2007
			ZA 200708416 A 30-09-2009

US 5752644	A	19-05-1998	US 5752644 A 19-05-1998
			US 5911353 A 15-06-1999

US 2009261143	A1	22-10-2009	EP 2018248 A2 28-01-2009
			US 2007278277 A1 06-12-2007
			US 2009261143 A1 22-10-2009
			US 2010243705 A1 30-09-2010
			US 2011266328 A1 03-11-2011
			US 2013015230 A1 17-01-2013
			WO 2007137243 A2 29-11-2007
