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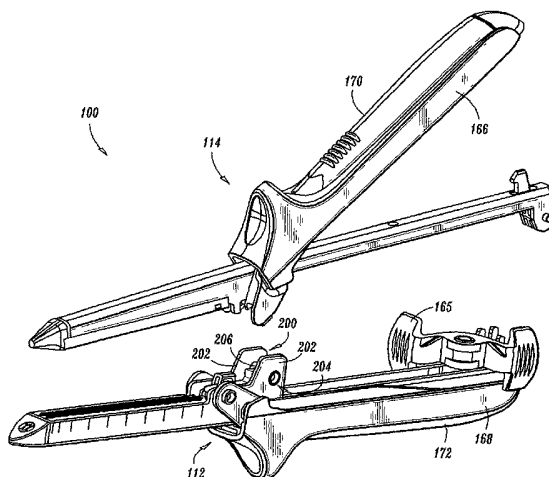
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- (88) Date of publication of the international search report:
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[Continued on next page]

(54) Title: SURGICAL FASTENER APPLYING APPARATUS



(57) Abstract: An improved surgical fastener applying apparatus includes a cartridge half-section and an anvil half-section with the cartridge and anvil half-sections being relatively movable from an unclamped position to a fully clamped position. The apparatus includes a replaceable staple cartridge assembly having a plurality of surgical staples and a pivotably mounted safety lock-out. The safety lock-out is pivotable between an initial position in which a relative movement of the cartridge and anvil half-sections to the fully clamped position is permitted and a blocking position in which a relative movement of the cartridge and anvil half-sections to return them to their fully clamped position after the plurality of staples have been at least partially fired is prevented. The apparatus further includes a pivotably mounted firing lever for moving a pair of camming surfaces longitudinally. In addition, each of the presently disclosed cartridge and anvil half-sections of the fastener applying apparatus includes a clamping lever, which clamping levers are configured and adapted to enable the applying apparatus to be opened by either one of the cartridge half-section and the anvil half-section.



WO 02/030297 A3



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

Inter Application No
PCT/US 01/32213

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61B17/072

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)
IPC 7 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 practical, search terms used)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 465 896 A (DICESARE PAUL ET AL) 14 November 1995 (1995-11-14) column 5, line 18 - line 48; figure 1 column 8, line 59 -column 9, line 18; figure 2 column 10, line 31 -column 11, line 5; figures 5-7	39-41
Y	---	1,4
Y	US 5 141 144 A (FOSLIEN FLOYD ET AL) 25 August 1992 (1992-08-25) column 3, line 6 - line 13; figures 1,5	1,4
A	---	39
A	US 4 892 244 A (NUCHOLS RICHARD P ET AL) 9 January 1990 (1990-01-09) column 2, line 40 -column 3, line 19; figures 1-4 --- -/--	1,4, 39-41

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in 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 document 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

22 April 2002

Date of mailing of the international search report

12. 08. 2002

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INTERNATIONAL SEARCH REPORT

Inter: ☐ Application No
PCT/US 01/32213

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 5 988 479 A (PALMER MITCHELL J) 23 November 1999 (1999-11-23) column 5, line 35 - line 52; figures 2,5,5A</p> <p style="text-align: center;">-----</p>	1,39

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 01/32213

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 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 fee, this Authority did not invite payment of any additional fee.
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.:

1-19,39-43 (indep. claims 1,39)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ 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: 1-19,39-43 (indep. claims 1,39)

Surgical fastener applying apparatus with a replaceable staple cartridge having a pivotably mounted safety lock-out and a pivotably mounted firing lever.

2. Claims: 20-38 (indep. claim 20)

Surgical fastener applying apparatus with clamping levers adapted for operative movement to enable opening of the applying apparatus on either the cartridge half-section side or the anvil half-section side.

3. Claims: 44-46 (indep. claim 44)

Replaceable cartridge with a shipping wedge removably coupled to the cartridge and adapted to cover staple rows.

4. Claim : 47

Surgical fastener applying apparatus with rocker and cam bar arrangement adapted for preventing a longitudinal movement of said cam arrangement.

5. Claim : 51

Replaceable staple cartridge with friction fingers for creating a frictional engagement between said cartridge and an inner surface of the cartridge half-section.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/32213

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