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Declarations under Rule 4.17:

— as to the identity of the inventor (Rule 4.17(i))

[Continued on next page]

(54) Title: MODULAR MOTOR DRIVEN SURGICAL INSTRUMENTS WITH ALIGNMENT FEATURES FOR ALIGNING ROTARY DRIVE SHAFTS WITH SURGICAL END EFFECTOR SHAFTS

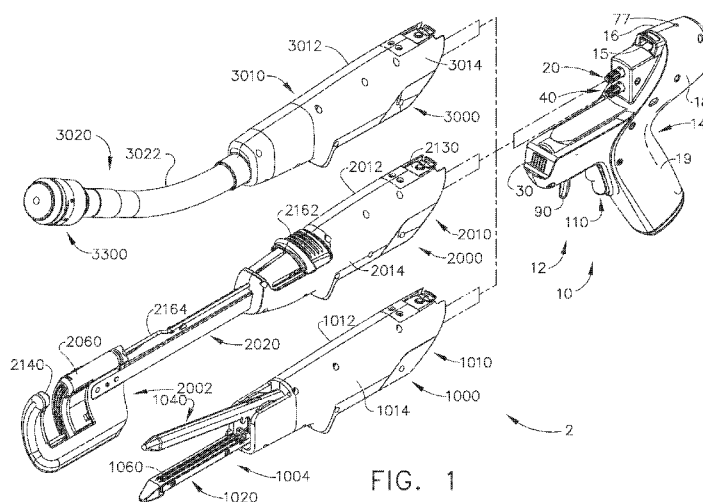


FIG. 1

(57) Abstract: Coupling systems for removably coupling dual rotary drive shafts of a surgical instrument to corresponding driven shafts of a surgical end effector. The surgical instrument may include a first rotary drive shaft that includes a first drive shaft axis and a second rotary drive shaft that includes a second drive shaft axis. The second drive shaft axis may be offset from and parallel with the first drive shaft axis. The coupling systems may facilitate simultaneous operable attachment of the first and second drive shafts of the surgical instrument with corresponding first and second driven shafts of a surgical end effector such that rotation of the first drive shaft rotates the first driven shaft and rotation of the second drive shaft rotates the second driven shaft.



— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *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))*

Published:

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2014/033898

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61B17/00 A61B17/068 A61B17/072 A61B17/07207 A61B19/00
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 2012/089131 A1 (ZEMLOK MICHAEL [US] ET AL) 12 April 2012 (2012-04-12) the whole document	1-20
X	US 2012/298719 A1 (SHELTON IV FREDERICK E [US] ET AL) 29 November 2012 (2012-11-29) paragraph [0136] - paragraph [0140]; figures 6-9	14-17
A	-----	1-13, 18-20
A	EP 1 813 201 A1 (ETHICON ENDO SURGERY INC [US]) 1 August 2007 (2007-08-01) the whole document	1-13, 18-20
X	-----	14-17
X	WO 00/72765 A1 (POWERMED INC [US]) 7 December 2000 (2000-12-07) figures 3-6	14-17



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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19/11/2014

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2014/033898

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: 1-13, 18-20

A surgical instrument system comprising a dual drive system, with means for simultaneously removably and operably coupling the first rotary drive shaft to the first end effector, and the second rotary drive shaft to the second end effector, such that rotation of the first rotary drive shaft rotates the first end effector and the second rotary drive shaft rotates the second end effector.

2. claims: 14-17

A mechanical coupling system for coupling a dual rotary drive shafts.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2014/033898

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2014/033898

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