

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
1 April 2004 (01.04.2004)

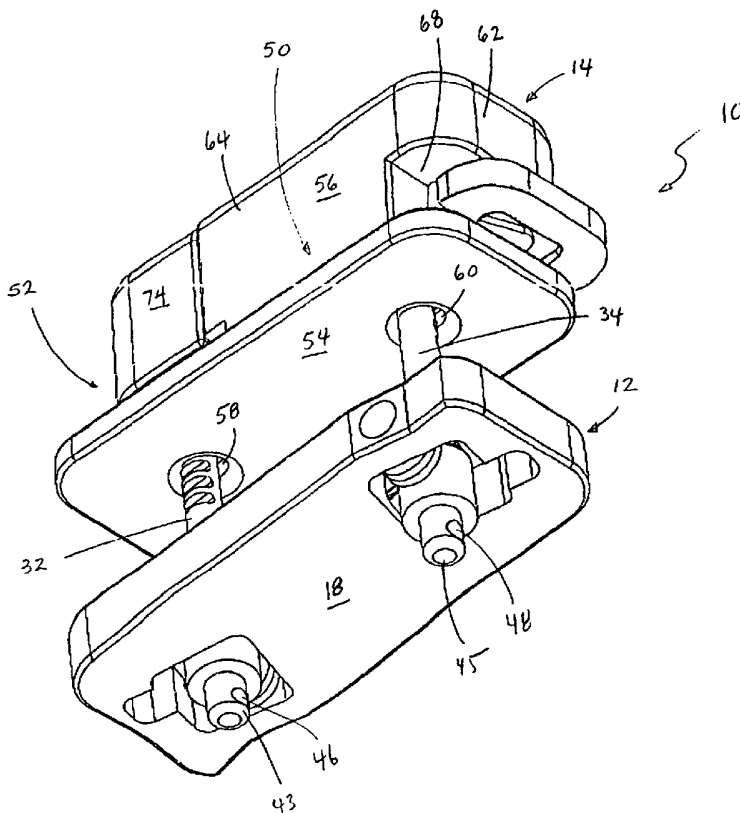
PCT

(10) International Publication Number
WO 2004/026348 A3

- (51) International Patent Classification⁷: A61B 17/10 (71) Applicants and
(72) Inventors: SIXTO, Robert, Jr. [US/US]; 8235 S.W. 99th Street, Miami, FL 33156 (US). SMITH, Kevin, W. [US/US]; 570 Arvida Parkway, Coral Gables, FL 33156 (US). KORTENBACH, Juergen, A. [US/US]; 122 Pinecrest Drive, Miami Springs, FL 33166 (US). McBRAYER, Michael, Sean [US/US]; 6160 Chapman Field Drive, Miami, FL 33156 (US). SLATER, Charles, R. [US/US]; 2350 S.W. 26th Avenue, Fort Lauderdale, FL 33312 (US).
- (21) International Application Number: PCT/US2003/029522
- (22) International Filing Date: 19 September 2003 (19.09.2003)
- (25) Filing Language: English
- (26) Publication Language: English (74) Agents: GREENBERG, Laurence, A. et al.; Lerner and Greenberg, P.A., P.O. Box 2480, Hollywood, FL 33022-2480 (US).
- (30) Priority Data: 10/252,069 20 September 2002 (20.09.2002) US (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,

[Continued on next page]

(54) Title: INSTRUMENT FOR APPLYING A SURGICAL FASTENER PARTICULARLY FOR THE TRANSORAL TREATMENT OF GASTROESOPHAGEAL REFLUX DISEASE (GERD)



(57) Abstract: A surgical instrument includes an end effector having a clevis and first and second jaws mutually rotatable between open and closed positions. The jaws are proximally directed and laterally displaced relative to a longitudinal axis of a control shaft of the instrument. The jaws hold first and second parts of a fastener, respectively. The first part includes a base having upstanding tissue piercing posts, and the second part includes another base defining apertures for receiving the posts, as well as a portion movable relative to the second base. When the upstanding posts are inserted into the apertures, the movable portion can be moved into a second configuration to lock the parts of the fastener together. The instrument is adapted to move the second part into the second configuration. A method for using the apparatus and fastener are also provided.

WO 2004/026348 A3



SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:

21 May 2004

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

International application No.

PCT/US03/29522

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61B 17/10
 US CL : 606/153, 205

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)

U.S. : 606/153, 157, 205-207, 219, 220; 227/175.1

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)

East - jaw,clevis,gastroesophageal,clip,hinge

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 6,086,600 A (KORTENBACH) 11 July 2000 (11.07.2000), Figs. 1-6.	1-3,12-15,36 ----- 16
X Y	US 5,403,326 A (HARRISON et al) 04 April 1995 (04.04.1995), Fig. 8C; col. 8, lines 1-29. US 5,465,894 A (CLARK et al) 14 September 1995 (14.09.1995), Figs. 4 and 5, column 11, lines 26-56.	27 16
X,P	US 2003/0055442 A1 (LAUFER) 20 March 2003 (20.03.2003), entire document.	28-32
X --- A	US 6,139,563 A (COSGROVE III et al) 31 October 2000 (31.10.2000), Fig. 1.	38-40 ----- 1-37,41

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"&" document member of the same patent family
"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	

Date of the actual completion of the international search

29 January 2004 (29.01.2004)
 Name and mailing address of the ISA/US
 Mail Stop PCT, Attn: ISA/US
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 Facsimile No. (703)305-3230

Date of mailing of the international search report

16 APR 2004

Authorized officer

Linda J Sholl *L. Sholl*
 Telephone No. (703) 308-0861