

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 July 2007 (26.07.2007)

PCT

(10) International Publication Number
WO 2007/084731 A3

- (51) International Patent Classification:
A61B 17/32 (2006.01)
- (21) International Application Number:
PCT/US2007/001557
- (22) International Filing Date: 19 January 2007 (19.01.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
11/336,274 20 January 2006 (20.01.2006) US
- (71) Applicant (for all designated States except US):
ETHICON ENDO-SURGERY, INC. [US/US]; 4545
Creek Road, Cincinnati, Ohio 45242 (US).

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HOUSER, Kevin, L. [US/US]; 470 Foliage Lane, Springboro, Ohio 450366 (US). MIYATA, Shinichi [JP/JP]; 2-40-18 Maruyamadai, Konan-ku, Yokohama 233-0013 (JP). KOZUKI, Atsunori [JP/JP]; 56-6-311 Shiratoridai, Aoba-ku, Yokohama 227-0054 (JP).
- (74) Agents: JOHNSON, Phillip S. et al.; 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,

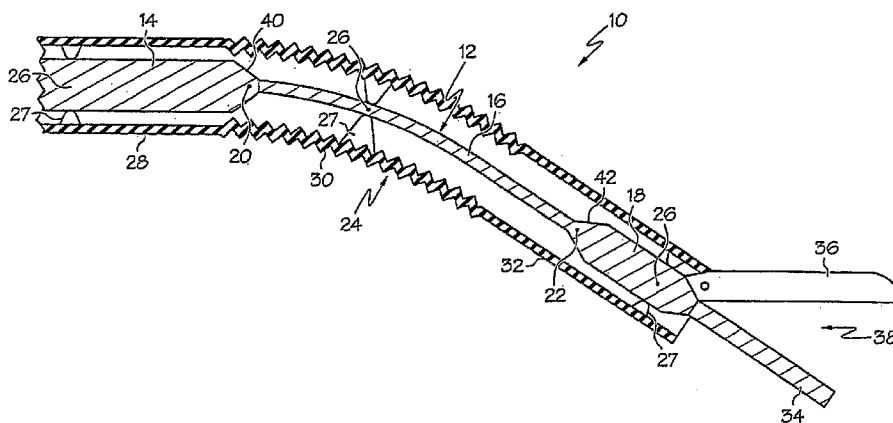
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (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:
22 November 2007

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.

(54) Title: ULTRASOUND MEDICAL INSTRUMENT HAVING A MEDICAL ULTRASONIC BLADE



(57) Abstract: A first ultrasound medical instrument includes a medical ultrasonic blade having first, second and third blade portions. The second blade portion is more bendable than either of the first and third blade portions. A second ultrasound medical instrument includes a medical ultrasonic blade having a proximal blade portion and a distal blade portion. The distal blade portion bends more easily than does the proximal blade portion. The distal blade portion includes a distal end portion adapted to contact and ultrasonically treat patient tissue. A third ultrasonic medical instrument includes a medical ultrasonic blade. The medical ultrasonic blade includes a proximal blade portion having a centerline and includes a distal blade portion in contact with the proximal blade portion at a substantially planar interface. The interface is oriented at a non-zero angle with respect to a perpendicular to the centerline at the interface.

WO 2007/084731 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/01557

| A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - A61B 17/32 (2007.01) USPC - 606/169 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(8) - A61B 17/32, B25J 7/00 (2007.01) USPC - 606/169, 414 Documentation searched other than <i>minimum</i> 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) MicroPatent, IP.com, Google Patents, Google Scholar | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT | | |
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | US 6,325,811 B1 (MESSERLY) 04 December 2001 (04.12.2001) entire document | 1-15, 18-22 |
| -- | | ----- |
| Y | | 16-17 |
| Y | WO 2002/076685 A1 (GENGENBACH et al) 03 October 2002 (03.10.2002) abstract | 16 |
| Y | US 6,063,098 A (HOUSER et al) 16 May 2000 (16.05.2000) entire document | 17 |
| <input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> | | |
| * 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 13 August 2007 | | Date of mailing of the international search report 24 SEP 2007 |
| 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. 571-273-3201 | | Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774 |