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[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR ARTICULATING THE WRIST OF A LAPAROSCOPIC GRASPING INSTRUMENT

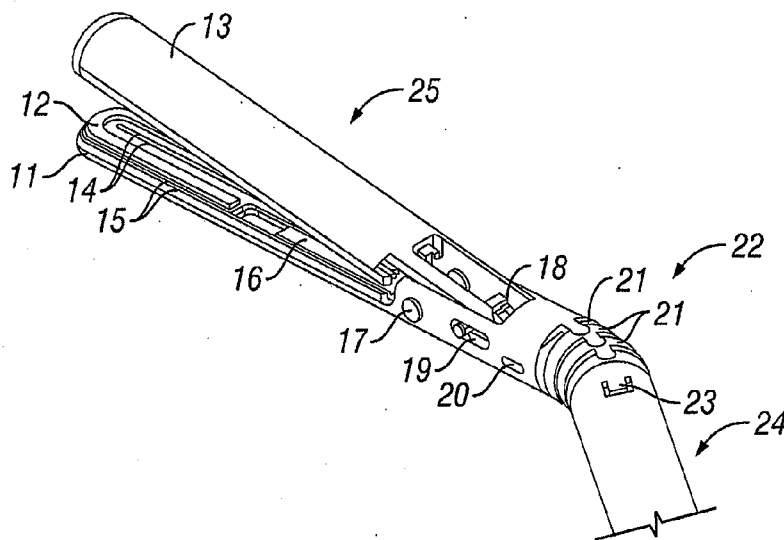


FIG. 1

(57) Abstract: A medical instrument has a set of opposing jaws that can be articulated, both left and right, from centerline. The instrument has a proper bend radius and support for the jaw actuation member and cutter driving member. The bendable support for the drive members comprises tightly wound coil springs. Another embodiment of the invention controls the degree of articulation at the handle of the laparoscopic instrument. A further embodiment of the invention incorporates a locking mechanism to prevent motion of the wrist while the user performs other operations on the device. The locking mechanism also includes an indexing feature with which the user can index and choose the necessary amount of angle between preset angles.



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— *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))*

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## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2009/033443****A. CLASSIFICATION OF SUBJECT MATTER****A61B 17/28(2006.01)i, A61B 17/00(2006.01)i**

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

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS (KIPO internal) "laparoscopic, grasping, articulation wrist "

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|-----------|--|-----------------------|
| X         | US 2007/0250113 A1 (DAVID ELIAS HEGEMAN et al.) 25 October 2007  | 1, 7, 17              |
| A         | See abstract, figs. 1-4,25A,25B,27,29,35, paragraphs 0004,0081,0084,0088,0100,0109,0111,0124 and claims 1,5,11,16,18,19,23,45,47 | 2-6, 8-16, 18-22      |
| A         | US 2006/0190029 A1 (KENNETH S. WALES) 24 August 2006   | 1-22                  |
|           | See abstract, figs. 1,2,6,8 paragraphs 0002,0011,0012,0048,0050,0059 and claims 1,4,10,11,15                                     |                       |
| A         | US 5,456,684 A (MARK A.SCHMIDT et al.) 10 October 1995   | 1-22                  |
|           | See abstract, figs. 1-5,13, columns 1-3,5-7 and claims 1,6,10,12-15  |                       |
| A         | US 5,549,637 A (LAWRENCE CRAINICH) 27 August 1996  | 1-22                  |
|           | See abstract, figure 1, columns 1,2,8 and claims 1,9-11,39   |                       |

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* Special categories of cited documents:

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

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**PCT/US2009/033443**

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s)   | Publication<br>date  |
|---|---------------------|--|--|
| US 2007/0250113 A1                        | 25.10.2007          | AU 2004243056 A1<br>CA 2526381 A1<br>EP 1845834 A1<br>JP 19-502198 A<br>US 2004236316 A1<br>WO 2006057699 A1 | 09.12.2004<br>09.12.2004<br>24.10.2007<br>08.02.2007<br>25.11.2004<br>01.06.2006 |
| US 2006/0190029 A1                        | 24.08.2006          | AU 2006203020 A1<br>CA 2536915 A1<br>EP 1693008 A1<br>JP 2007-029722 A<br>US 20060190028 A1                  | 08.02.2007<br>18.08.2006<br>23.08.2006<br>08.02.2007<br>24.08.2006               |
| US 5,456,684 A                            | 10.10.1995          | None   |  |
| US 5,549,637 A                            | 27.08.1996          | None   |  |