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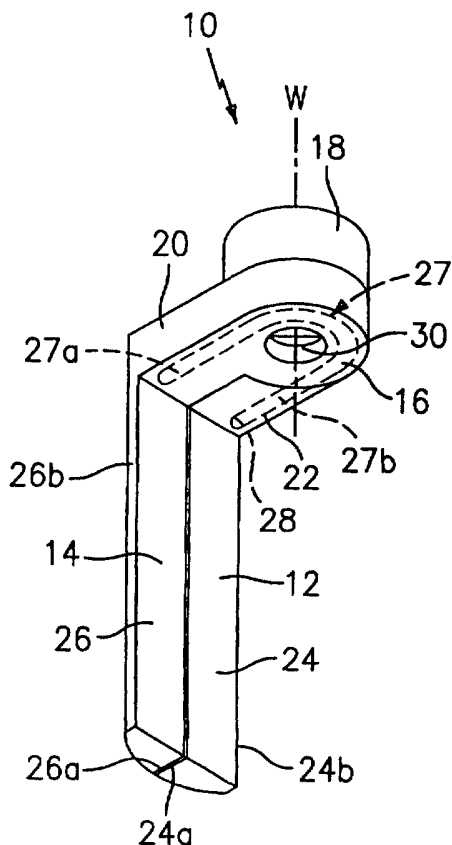
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  - (74) Agent: **AUDET, Paul, R.**; Tyco Healthcare Group LP, 150 Glover Avenue, Norwalk, CT 06856 (US).
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— *with international search report*

[Continued on next page]

(54) Title: LIGATION CLIP APPLIER AND METHOD



(57) Abstract: A torsional ligation clip applier (10) and method for use for endoscopic or laparoscopic vessel occlusion procedures is provided. The ligation clip includes a hub portion (16,18) and ligation arms (24, 26) for occluding a vessel. Ligation arms are independently rotatable about a common axis that is parallel to the longitudinal axis of the ligation arms. The ligation arms are biased in a first position by a biasing mechanism. The ligation arms of the clip are rotatable through at least one of a plurality of positions wherein it has a larger diameter than an access device. An applier receives at least one ligating clip in a first position and delivers the ligating clip to a vessel in a second position. Occlusion of the vessel occurs when one of the ligation arms is rotated into a third position.

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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*

*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.*

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**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US03/13523

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : A61B 17/08  
 US CL : 606/151, 153

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. : 606/151, 153

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)  
 Please See Continuation Sheet

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category * | Citation of document, with indication, where appropriate, of the relevant passages                 | Relevant to claim No. |
|------------|--|-----------------------|
| A          | US 5,653,720 A (JOHNSON et al) 05 August 1997 (05.08.1997), column 1, line 54 - column 2, line 44. | 1-32                  |
| A          | US 5,342,373 A (STEFANCHIK et al) 30 August 1994 (30.08.1994), column 2, lines 13-48.              | 1-32                  |
| A          | US 5, 217,473 A (YOON) 08 June 1993 (08.06.1993), see Abstract of the Disclosure.                  | 1-32                  |

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  |
|---|-----|--|
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| "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  |     |  |

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**INTERNATIONAL SEARCH REPORT**

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**Continuation of B. FIELDS SEARCHED Item 3:**  
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key words: clip, clamp, spring , bias