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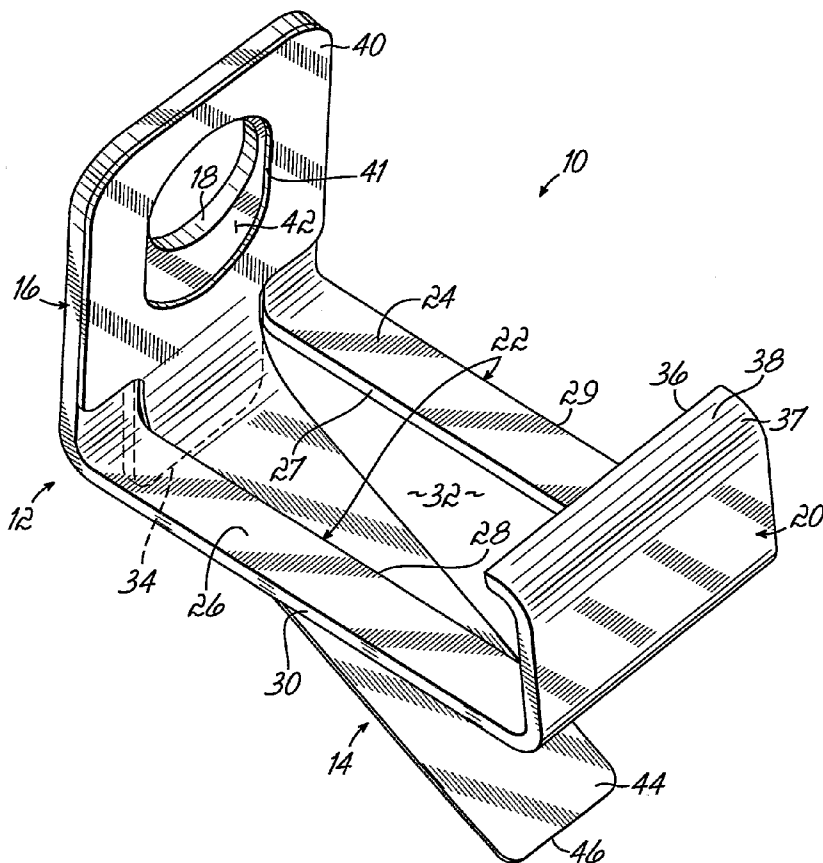
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[Continued on next page]

(54) Title: NEEDLE GUARD MECHANISMS



(57) Abstract: A needle guard (10) includes a clip (12) with a canting wall (16) to grip the needle shaft (56) and a distal wall (20) to block the tip (58) thereof, wherein the canting and distal walls may be interconnected by an angled strut (24), a spring member (14), such as a leaf spring, may have a portion extending past an edge (27) of the strut to bias the clip to grip the needle shaft, and the distal wall may be or include a stylus (38) and have an L-shape to define a lip (36) to help block the needle tip. The clip may have a depending heel (34) to help pivot the clip about a ledge (72) to grip the needle shaft. A needle support (80) may be provided to limit flexure of the needle which might otherwise allow the needle to come loose from the clip. Arrangements (300, 302) for limiting rotation of the needle hub and needle guard housing are provided, as is a protective shroud (320) to reduce the risk of inadvertent activation of the needle guard. Further, the needle guard may be used with a catheter assembly (200). Also provided is an improved duckbill release mechanism (260, 268).

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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*
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*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/US2006/025530A. CLASSIFICATION OF SUBJECT MATTER  
INV. A61M5/32 A61M25/06

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)  
A61M

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 practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/075609 A1 (LATONA PATRICK C [US]) 7 April 2005 (2005-04-07)  abstract; figures 1-3 -----	1-61, 79-81, 108-138, 163-170, 187-191

 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 document 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.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

19 January 2007

Date of mailing of the international search report

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Name and mailing address of the ISA/

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2006/025530

## Box 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.: 107  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
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 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 fee, this Authority did not invite payment of any additional fee.
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.:

See additional sheet(s)

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- 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: 1-61,79-81,108-138,163-170,187-191

A catheter device with a clip having a spring member solving the problem of biasing the clip towards the second state  
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2. claims: 62-78,171-186

A safety catheter device comprising a needle guard solving the problem of safely using a catheter  
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3. claims: 82-106

A safety catheter device comprising a catheter hub where a detent element is adapted to cooperate with a rib of the catheter hub solving the problem of rotatably and releasably holding the housing to the catheter  
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4. claims: 139-162

Needle protector comprising a clip having a strut solving the problem of connection of the first wall with the second wall  
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5. claims: 192-203

A needle guard clip solving the problem of providing an integral piece  
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No  
PCT/US2006/025530

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005075609	A1	07-04-2005	
		AU 2004283084 A1	06-05-2005
		CN 1863565 A	15-11-2006
		EP 1677860 A2	12-07-2006
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