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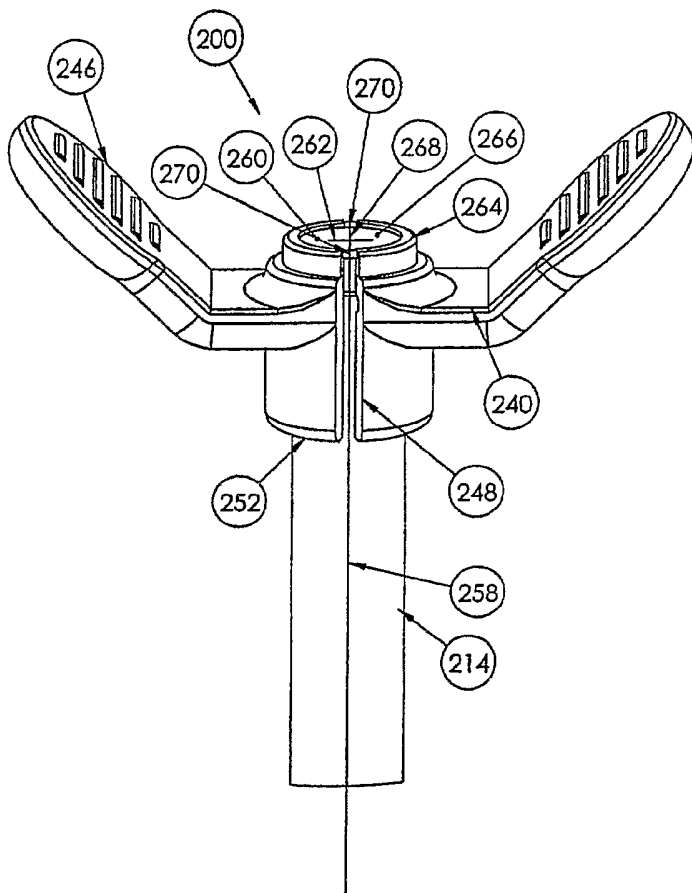
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[Continued on next page]

(54) Title: RELEASABLY LOCKING DILATOR AND SHEATH ASSEMBLY



(57) Abstract: A releasably locking dilator and sheath assembly (10,200,300) and methods for releasing the dilator (12) from the sheath and longitudinally splitting the sheath (14). The sheath hub has a valve (260,360) and two opposing winged tabs (42), each tab having a perpendicular portion (44) and an angled portion (46), as well as having a female locking portion (53). The dilator hub has a male locking portion (30) designed to engage the female locking portion of the sheath hub. The dilator is released from the sheath by rotating the dilator 90° in relation to the sheath and pulling the dilator out of the sheath. The sheath is longitudinally split by creating a couple on each of the winged tabs (42) thereby forcing the sheath and the sheath hub to split longitudinally. The sheath is removed from around a catheter while leaving the catheter in place.

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**Declaration under Rule 4.17:**

— *as to non-prejudicial disclosures or exceptions to lack of novelty (Rule 4.17(v))*

— *with a declaration as to non-prejudicial disclosures or exceptions to lack of novelty*

**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 June 2006

*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/US05/33612

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> US: 604/164.1, 256, 164.05, 164.04 IPC(8): A61M05/178 (2006.01)		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) US: 604/164.1, 256, 164.05, 164.04; IPC(8): A61M05/178 (2006.01)		
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) MicroPatent, DialogPro, MEDLINE		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO97/14456 (FALVAI) 24 April 1997 (24.04.1997) entire document	17-18
Y		1-9, 12
Y	US 6,083,207 A (HECK) 04 July 2000 (04.07.2000) entire document	1-9, 12
A	US 6,562,049 B1 (NORLANDER) 13 May 2003 (13.05.2003) entire document	1-9
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> 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	"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	
"E" earlier application or patent but published on or after the international filing date	"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	
"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)	"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	
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	
"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 09 February 2006	Date of mailing of the international search report <div style="text-align: center; font-size: 1.2em;">04 MAY 2006</div>	
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 Telephone No. 571-272-7774	

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/33612

## Box No. 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.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
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.: 13  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. 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:

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 additional fees, this Authority did not invite payment of additional fees.
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.:

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.