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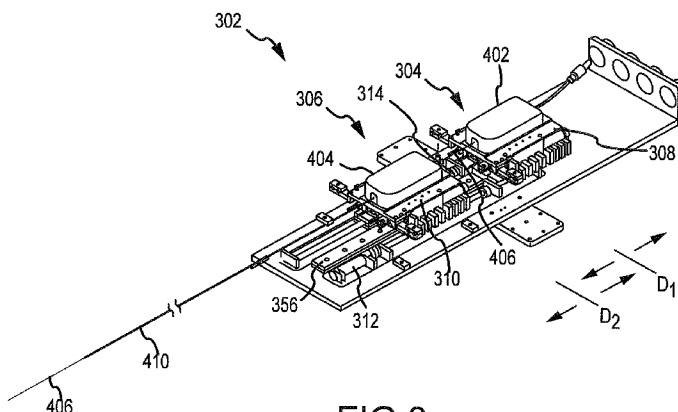


FIG. 3a

(57) Abstract: A robotic catheter manipulator assembly (300) may include a support member including a catheter manipulation base (308) and a sheath manipulation base (310) movable relative to each other and to the support member. Each manipulation base may be releasably connectable to a catheter cartridge (402) and a sheath cartridge (404). A drive mechanism (312) may be provided for moving the catheter and sheath manipulation bases (308,310) relative to each other and to the support member. The manipulation base (308) or the cartridge (402) may include a first element engageable with a complementary second element slidably engaged with the other one of the manipulation base or the cartridge for controlling movement of a component connected to the cartridge. The cartridge may be a transeptal cartridge, a catheter cartridge or a sheath cartridge, the component may be a surgically insertable device such as a transeptal needle, a catheter or a sheath.



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 09/38531

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(8) - A61B 19/00 (2009.01) USPC - 606/130 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) IPC8 : A61B 19/00 (2009.01) USPC : 606/130 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IPC8 : A61M 25/00, A61M 25/01, A61M 25/08 (2009.01) USPC : 74/490.01, 606/1, 604/264, 600/434 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PubWEST (PGPB,USPT,EPAB,JPAB), Google Scholar cartridge, carriage, block, base, sheath, robot\$, catheter, motorized, drive mechanism\$, finger, lever, rod, actuat\$, steers\$, guide\$, wire, cable, manipulat\$, advanc\$, prong, slide\$, linear actuator, control, endoscope, manipulator		
<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 --- Y	US 2007/0233044 A1 (WALLACE et al) 4 October 2007 (04.10.2007) see especially para [0069], [0070], [0071], [0072], [0074], [0076], [0099], [0105], [0109], [0120], [0127], [0137], fig 1A, 3, 11, 13, 20, 30A	1, 14-19 ----- 2-13, 20-47
Y	US 2006/0089637 A1 (WERNETH et al) 27 April 2006 (27.04.2006) see especially para [0052], [0070], fig 7	2-8, 20-47
Y	US 2002/0087048 A1 (BROCK et al) 4 July 2002 (04.07.2002) see especially para [0197], [0198], fig 43, 44	9-13, 24-26, 36-39
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/>		
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Date of the actual completion of the international search 5 May 2009 (05.05.2009)		Date of mailing of the international search report <b>19 MAY 2009</b>
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: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774