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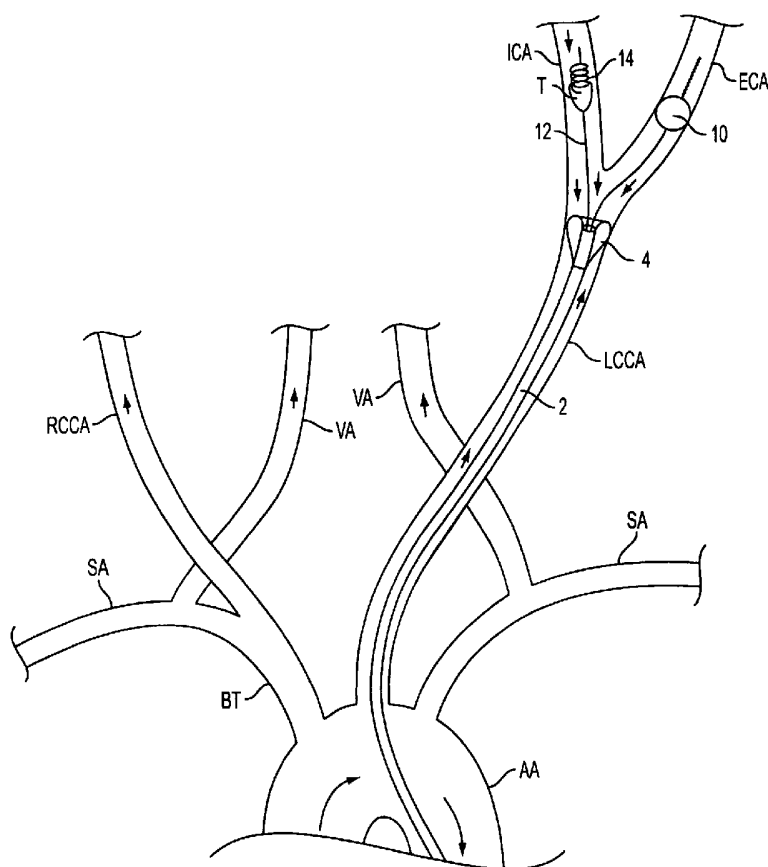
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[Continued on next page]

(54) Title: APPARATUS AND METHODS FOR TREATING STROKE AND CONTROLLING CEREBRAL FLOW CHARACTERISTICS



(57) Abstract: Apparatus and methods for treatment of stroke are provided. In the preferred embodiment, the present invention disposes at least one catheter (2) having a distal occlusive member (4) in the common carotid artery of the hemisphere of the cerebral occlusion. Retrograde flow may be provided through the catheter (2) to effectively control cerebral flow characteristics. Under such controlled flow conditions, a thrombectomy device (12) may be used to treat the occlusion, and any emboli generated are directed into the catheter (2).



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**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US02/27153

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : A61M 31/00  
 US CL : 604/509

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. : 604/509,106,96.01,4.01,6.1,6.16,507,508,510,500,101.02,264,523,528,915,919,103,271; 606/159,192,167,194

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.
X	US 6,066,158 A (ENGELSON et al ) 23 May 2000, fig. 2	1,2
X	US 6,066,149 A (SAMSON et al) 23 May 2000, figs. 6A-6D	10-15, 17,19-21,23
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Y		21,22

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	"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 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 30 October 2002 (30.10.2002)	Date of mailing of the international search report 17 APR 2003
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer  Cris L. Rodriguez Telephone No. (703) 308-2194

**INTERNATIONAL SEARCH REPORT**

PCT/US02/27153

**Continuation of B. FIELDS SEARCHED Item 3:**

EAST (thrombectomy and wire and nitinol, catheter and balloon and flow control, cerebral, wire and sheath or sleeve and openings or holes)