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[Continued on next page]

(54) Title: VENTRICULAR ASSIST DEVICE AND RELATED METHODS

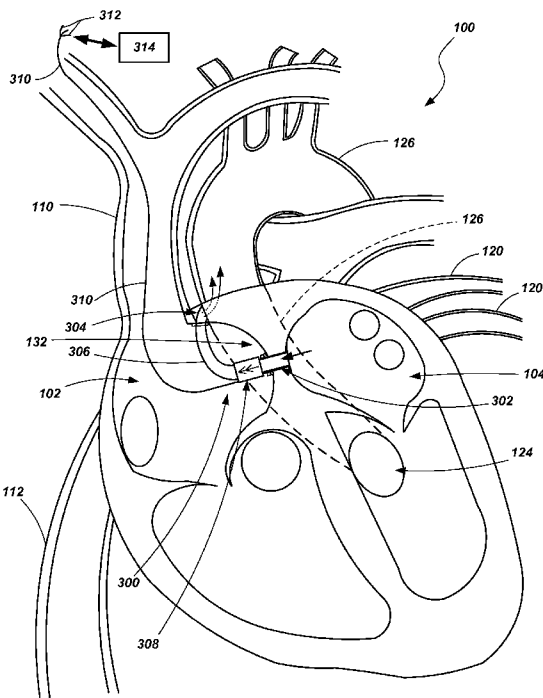


FIG. 16

(57) Abstract: A method and system are provided for percutaneously gaining access to oxygenated blood with one or more anastomosis devices and pumping such oxygenated blood directly to the aorta adjacent to the right atrium or left atrium via a VAD system. In one embodiment, a VAD system can be implanted with open surgery.

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LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2010/055216A. CLASSIFICATION OF SUBJECT MATTER
INV. A61M1/12
ADD.

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 2005/187425 A1 (ALFERNES CLIFTON A [US] ET AL) 25 August 2005 (2005-08-25) the whole document	1-8,30, 31
X	WO 2005/037345 A2 (UNIV VANDERBILT [US]; SALLOUM JOSEPH G [US]; ABSI TAREK S [US]) 28 April 2005 (2005-04-28) abstract; figures 1,4b	1,30
X	US 2009/088597 A1 (FRAZIER OSCAR H [US] ET AL) 2 April 2009 (2009-04-02) the whole document	1,30
X	WO 2008/027869 A2 (CIRCULITE INC [US]; MARSEILLE OLIVER [DE]; KERKHOFFS WOLFGANG [DE]) 6 March 2008 (2008-03-06) paragraph [0035] - paragraph [0036]; figure 1	1,30
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 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.

"&" document member of the same patent family

Date of the actual completion of the international search

16 March 2011

Date of mailing of the international search report

12/07/2011

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2010/055216

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 00/37139 A1 (A MED SYSTEMS INC [US]; ABOUL HOSN WALID NAJIB [US]; KANZ WILLIAM R [U] 29 June 2000 (2000-06-29) abstract -----	1-33

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2010/055216

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.:
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:

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 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.:
1-8, 30-33

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-8, 30-33

Claims 1-8 and 30-33 refer to a system to assist a left ventricle of a heart, the system comprising:
a first anastomosis device, a second anastomosis device, a flow path configured to flow oxygenated blood from the left atrium, through the first anastomosis device, to the second anastomosis device and directly into the aorta; and a pumping device operatively coupled to the flow path.
The problem solved is how to design a left ventricle assisting device which can pump blood between two non-adjacent vessels or lumina.

2. claims: 23-29

Claims 23-29 refer to a system to assist a left ventricle of a heart, the system comprising:
an anastomosis device; the anastomosis device including a flow path; and a pumping device directly coupled to the anastomosis device.
The problem solved is how to design a left ventricle assisting device with as few anastomosis devices as possible.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2010/055216

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005187425	A1	25-08-2005	NONE

WO 2005037345	A2	28-04-2005	NONE

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		US 6926662	B1 09-08-2005
