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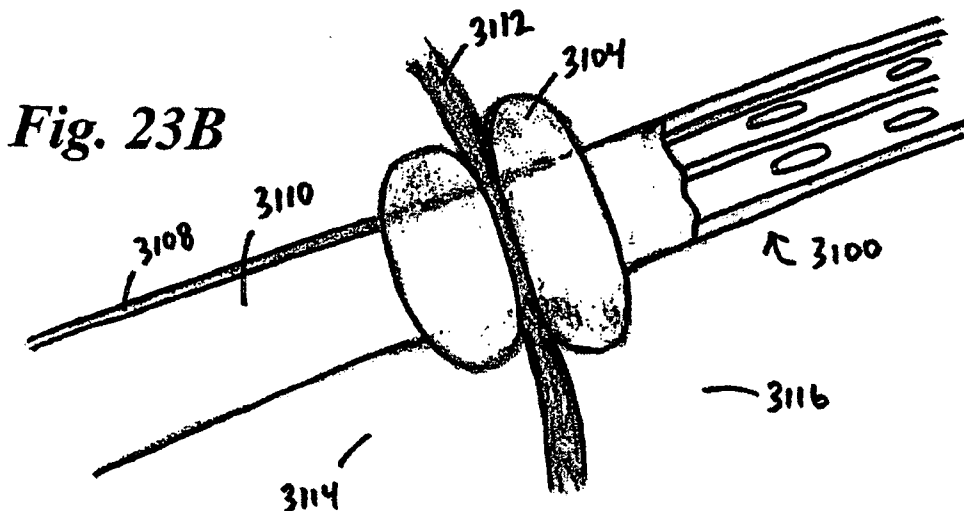
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**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: DEVICES, SYSTEMS, AND METHODS TO FACILITATE HEART FUNCTION



(57) Abstract: Devices, systems, and methods for accessing tissue, including the internal and external tissues of the heart, are disclosed. At least some of the embodiments disclosed herein provide access to the internal and external tissues of the heart to assist heart function. In at least one embodiment, a suction/infusion catheter is used to deliver gas to a pericardial space surrounding a heart.

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— *of inventorship (Rule 4.17(iv))*

(88) **Date of publication of the international search report:**  
29 January 2009

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— *with international search report*

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**INTERNATIONAL SEARCH REPORT**

International application No.  
PCT/US2008/060870

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC(8) - A61M 1/10 (2008.04)  
 USPC - 600/16  
 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)  
 IPC(8) - A61H 31/00; A61M 1/10, 1/12 (2008.04)  
 USPC - 600/10-19; 623/3.1, 3.11, 3.17, 3.28

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

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,692,458 B2 (FORMAN et al) 17 February 2004 (17.02.2004) entire document	41-49, 91-99
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Y		31-40, 81-90, 126
Y	US 6,241,706 B1 (LESCHINSKY et al) 05 June 2001 (05.06.2001) entire document	1-40, 50-90, 111-142
Y	US 2004/0008853 A1 (PELRINE et al) 15 January 2004 (15.01.2004) entire document	1-40, 50-90, 111-142
Y	US 2007/0068523 A1 (FISHMAN) 29 March 2007 (29.03.2007) entire document	12, 27-30, 62, 77-80
Y	US 6,511,412 B1 (FREED et al) 28 January 2003 (28.01.2003) entire document	24-26, 74-76
Y	US 6,432,039 B1 (WARDLE) 13 August 2002 (13.08.2002) entire document	116-125, 133-142

Further documents are listed in the continuation of Box C.

\* 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 05 November 2008	Date of mailing of the international search report <b>18 NOV 2008</b>
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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 PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774
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**INTERNATIONAL SEARCH REPORT**

International application No.  
PCT/US2008/060870

**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:  
 Group I, claims 1-99 and 111-142, drawn to a device for assisting heart function comprising at least two electromagnetic plates, a cardiac processor, a bladder, and a pericardial balloon.  
 Group II, claims 100-109 drawn to a device for assisting heart function comprising piston having a proximal end, a distal end, and an inner chamber.  
 Group III, claims 110, drawn to a device for assisting heart function comprising a first non-electromagnetic plate.  
 Group IV, claims 143-165, drawn to a method and system for closing an aperture in a targeted tissue, comprising inserting a coil in the lumen of a catheter and inserting a shaft within the lumen of a catheter

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.:  
1-99 and 111-142

**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.