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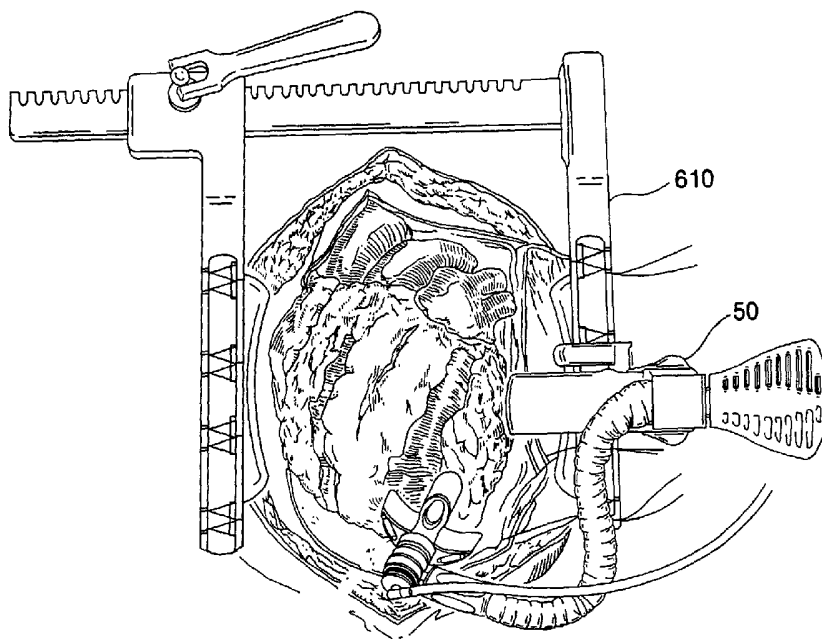
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(54) Title: METHOD AND DEVICE FOR ORGAN POSITIONING



(57) Abstract: The invention provides an organ positioning device and method that employs suction to hold organ tissue to the device. The device allows the organ, for example, heart to be positioned in a desired orientation but otherwise allowing movement of the heart as the heart beats. The device is designed to be relatively atraumatic to heart tissue. Generally, the device comprises a resiliently flexible suction head having a plurality of legs that flex to conform to the surface of the heart. The suction head has vacuum passageways in fluid communication with the legs to apply suction between the legs and the surface of the heart.



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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/US 02/01046

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61B17/02

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 7 A61B

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, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 60930 A (GUIDANT CORP) 2 December 1999 (1999-12-02) page 28, line 11 - line 18 page 30, line 24 -page 34, line 20 figures	1-41
A	--- WO 00 10466 A (VALENTINI VALERIO ;CORONEO INC (CA); CARTIER RAYMOND (CA); PAOLITT) 2 March 2000 (2000-03-02) page 36, line 11 -page 41, line 25 figure 12B	1-41
A	--- WO 96 40354 A (HEARTPORT INC) 19 December 1996 (1996-12-19) page 30, line 21 -page 33, line 8 figure 33 -----	1-41

Further documents are listed in the continuation of box C.

Patent family members are listed in 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

27 August 2002

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10. 12. 02

Name and mailing address of the ISA

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Bridge, S

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 02/01046

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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.: 42-45, 58-71
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
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 II Observations where unity of invention is lacking (Continuation of item 2 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 fee, this Authority did not invite payment of any additional fee.
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.:
1-41

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

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: 1-20, 21-41

PROBLEM : a suction pad for the heart; SOLUTION : the suction pad, is formed of resiliently flexible material, has a plurality of legs that flex to conform to the surface of the heart, and has vacuum passageways in fluid communication with the legs to apply suction between the legs and the surface of the heart;

2. Claims: 46-48, 53-57

PROBLEM : holding a beating heart; SOLUTION : a bellows-type suspension element connecting the suction head and supporting arm, the bellows-type suspension element flexing to allow the suction head to move in response to beating of the heart;

3. Claims: 49-52

PROBLEM : ensure good suction effect without damaging the heart; SOLUTION : the suction head is formed of resiliently material, the suction head has vacuum passageways for applying suction to the surface of the heart and a resiliently flexible peripheral flange, the suction head or flange being sufficiently resiliently flexible that the suction head draws down toward the surface of the heart more than the surface of the heart is pulled into the suction head;

4. Claims: 72-86

PROBLEM : avoid contact with the surface of the heart;
SOLUTION : a porous material is disposed on the suction pad between the vacuum passageway and the surface of the heart;

INTERNATIONAL SEARCH REPORT
 Information on patent family members

International Application No
 PCT/US 02/01046

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