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- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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24 September 2009

(54) Title: ADJUSTABLE ANNULOPLASTY RINGS

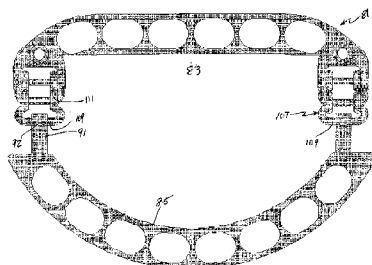


FIG 19

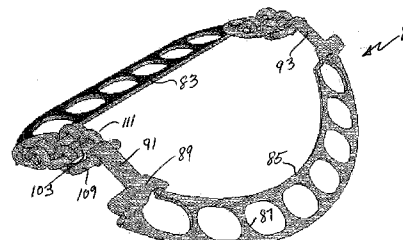


FIG 22

(57) Abstract: Adjustable annuloplasty rings for repair of a mitral or tricuspid valve which incorporate at least two separate parts that are adjustably interconnectable to create a ring the circumference of which can be changed in dimension. Rings having interconnections at spaced-apart lateral locations, which interconnections allow bidirectional movement to either shorten or lengthen the ring at either such location, afford a surgeon opportunity to make further adjustments to the dimensions of the annuloplasty ring after its initial partial securing to the heart valve tissue and thereby adjust the AP diameter of the valve being repaired. The mating interconnections at two lateral locations on the ring can be constructed so as to allow hinged movement about an axis defined by the interconnections to permit hinged movement between the two separate parts.



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**INTERNATIONAL SEARCH REPORT**

International application No  
PCT/IB2009/005022

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. A61F2/24

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)  
A61F

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	WO 2007/136783 A2 (MITRALSOLUTIONS INC [US]; CARTLEDGE RICHARD G [US]; LEE LEONARD Y [US]) 29 November 2007 (2007-11-29)	1-5
A	paragraph [0134] - paragraph [0144]; figures 31-39	13
X	US 2001/021874 A1 (CARPENTIER ALEXANDRE [FR] ET AL) 13 September 2001 (2001-09-13)	1-7
Y	paragraph [0064] - paragraph [0072]; figures 5, 6	11, 13-15
Y	WO 03/053289 A1 (MILO SIMCHA [IL]) 3 July 2003 (2003-07-03) cited in the application page 10, line 34 - page 11, line 20; figures 12, 13, 18	11, 13-15

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  24 July 2009	Date of mailing of the international search report  30/07/2009
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer  Neumann, Elisabeth
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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB2009/005022

## 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.: 12  
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 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:

1.  As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable 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.:

### 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.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2009/005022

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007136783 A2	29-11-2007	US 2008027483 A1	31-01-2008
US 2001021874 A1	13-09-2001	NONE	
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