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- (71) **Applicant (for all designated States except US):** BETH ISRAEL DEACONESS MEDICAL CENTER [US/US], 330 Brookline Avenue, Boston, MA 02215 (US)
- (72) **Inventor; and**
- (75) **Inventor/Applicant (for US only):** LAHAM, Roger, J. [US/US], 39 Kent Street, #4, Brookline, MA 02445 (US)

- (74) **Agents:** HOOVER, Thomas, O. et al., Weingarten, Schurgin, Gagnebin & Lebovici, LLP, Ten Post Office Square, Boston, MA 02109 (US)
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[Continued on next page]

(54) **Title:** PERCUTANEOUS AORTIC VALVE ASSEMBLY

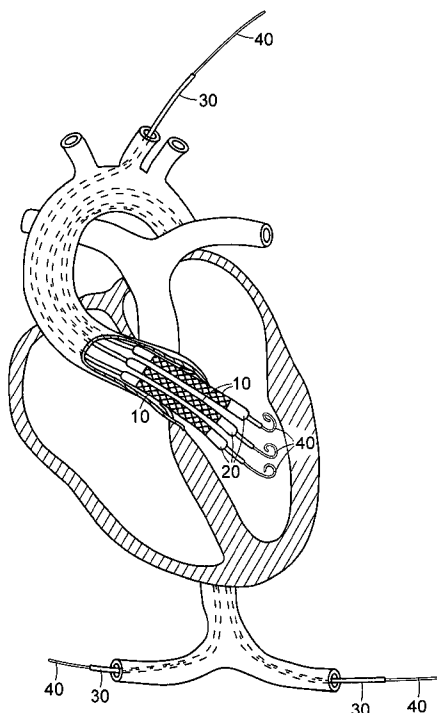


FIG. 3B

(57) **Abstract:** The present invention provides devices and methods for the treatment of cardiovascular valve diseases such as aortic stenosis. A vascular valve assembly is formed from two or more valve devices, each of which contains a valve mounted in a stent. The individual valve devices are brought to the site of the defective valve by standard percutaneous catheterization methods. Lateral expansion of the stents at the site of valve replacement produces a functioning valve assembly. Appropriate sizing and number of valve devices prevents regurgitation and migration. The assembly of two or more smaller valve devices at the site of a defective valve prevents complications due to the large size of single valve prostheses.

WO 2008/051554 A3



PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(H))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(Ui))*
- *of inventorship (Rule 4.17(iv))*

**Published:**

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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

4 September 2008

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2007/022510

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. A61F2/82 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          Y       A	US 2004/210306 A1 (QUIJANO RODOLFO C [US] ET AL) 21 October 2004 (2004-10-21)  paragraphs [0033], [0036] - [0038], [0043], [0045] figures 4,7    -----  -/~	1-3,6-8, 10,11, 16,65          4,5,9, 12-14 41-43, 46-48, 50,51,56

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. 'Z' document member of the same patent family
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Date of the actual completion of the international search  <b>15 April 2008</b>	Date of mailing of the international search report  30/06/2008
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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, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  <b>Chevalot , Nicolas</b>
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INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2007/022510

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication where appropriate of the relevant passages	Relevant to claim No
Y	WO 00/48531 A (VENPRO [US]) 24 August 2000 (2000-08-24) page 2, lines 15-33 page 4, lines 20-27 figure 5	4, 5, 12-14
A		41, 44, 45, 52-54, 61
Y	----- US 2001/007956 A1 (LETAC BRICE [FR] ET AL) 12 July 2001 (2001-07-12) paragraphs [0129], [0130] figures 9A.9B	<b>9</b>
A		49
A	----- WO 95/16476 A (STEVENS JOHN H [US]) 22 June 1995 (1995-06-22)	41, 53, 57-60
A	----- EP 0 804 907 A (MEDINOL LTD [IL]) 5 November 1997 (1997-11-05) -----	41-54, 56-60

INTERNATIONAL SEARCH REPORT

International application No. PCT/US2007/022510

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. [X] Claims Nos. 15, 39, 55, 17-26, 29, 65 because they relate to subject matter not required to be searched by this Authority, namely: CI aims 15, 39 and 55 : Rule 39.1(1) PCT - Plant or animal varieties CI aims 17-26 : 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:

see additional sheet

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. [X] 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.:

1-14,16,41-54,56-61,65

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.

RJR THER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-14,16,41-54,56-61,65

A vascular valve assembly comprising at least two valves.  
A vascular valve delivery assembly comprising at least two valves and at least two catheters.

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2. claims: 27-40,62-64

A valve prosthesis

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2007/022510
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Information on patent family members

International application No

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