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(71) Applicant (for all designated States except US): EDWARDS LIFESCIENCES CORPORATION [US/US]; One Edwards Way, Irvine, CA 92614 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): HARITON, Iliia [IL/IL]; 36-C Haatzmaut St., Zichron-Yaacov (IL). BENICHOV, Netanel [IL/IL]; D.N. Hof-Carmel, 30808 (IL). NITZAN, Yaacov [IL/IL]; Haaliya Hashniya St.

42/1, Herzeliya (IL). FELSEN, Bella [IL/IL]; 26 Hazvi St, 34555 Haifa (IL). NGUYEN-THIEN-NH, Diana [US/US]; One Edwards Way, Irvine, CA 92614 (US). KHANNA, Rajesh [US/US]; One Edwards Way, Irvine, CA 92614 (US). NGUYEN, Son [US/US]; One Edwards Way, Irvine, CA 92614 (US). LEVI, Tamir [IL/IL]; Moshav Ein HaEmek (IL). PELLEDE, Itai [US/US]; One Edwards Way, Irvine, CA 92614 (US).

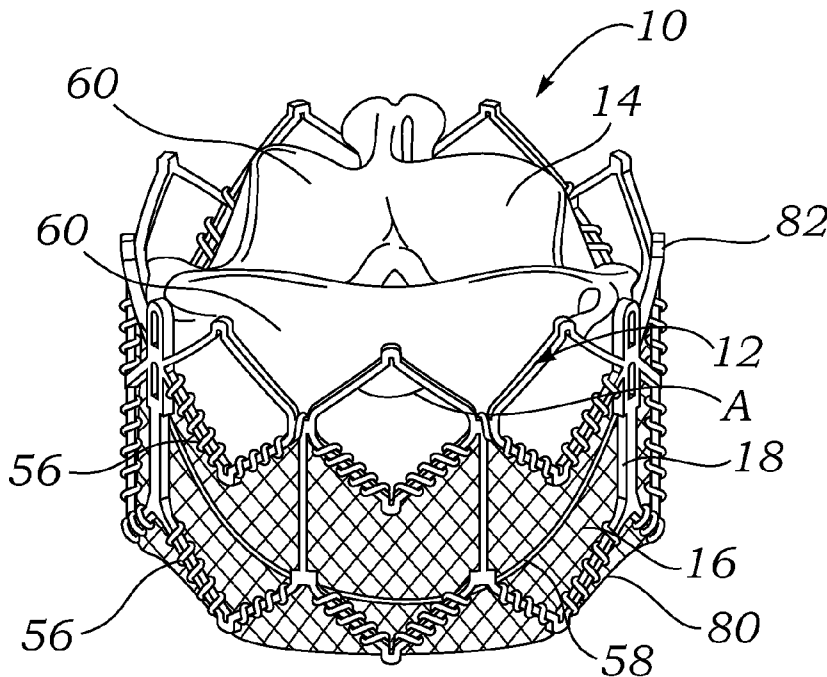
(74) Agents: HAUSER, David, L. et al.; Edwards Lifesciences LLC, One Edwards Way, Irvine, CA 92614 (US).

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[Continued on next page]

(54) Title: LOW PROFILE TRANSCATHETER HEART VALVE

Fig. 1



(57) Abstract: An implantable prosthetic valve (10), according to one embodiment, comprises a frame (12), a leaflet structure (14), and a skirt member (16). The frame can have a plurality of axial struts (20) interconnected by a plurality of circumferential struts (22, 24). The leaflet structure comprises a plurality of leaflets (e.g., three leaflets) arranged to form a tricuspid valve. The leaflet structure has a scalloped lower edge portion secured to the frame. The skirt member can be disposed between the leaflet structure and the frame.

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INTERNATIONAL SEARCH REPORT

International application No
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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	US 2004/039436 A1 (SPENSER BENJAMIN [IL] ET AL SPENSER BENJAMIN [IL] ET AL) 26 February 2004 (2004-02-26)	1,2,5, 10-13
Y	paragraphs [0011] - [0013], [0040], [0162], [0165], [0170], [0171], [0174], [0180] - [0182], [0214] - [0229], [0240]; figures 1,9a-9i,23a-24c,28,30a-33d,45a-45c	3,4,6,7
X	WO 2008/035337 A (VENTOR TECHNOLOGIES LTD [IL]) 27 March 2008 (2008-03-27) page 73, lines 7-29; figures 1,3G,4A-4C,10A-11D page 79, line 22 - page 80, line 24 page 87, line 5 - page 88, line 5 ----- -/--	1,2,5, 10-12,14

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	"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 document 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 3 September 2009	Date of mailing of the international search report 17/12/2009
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 Steiner, Bronwen

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006/025857 A1 (BERGHEIM BJARNE [US] ET AL) 2 February 2006 (2006-02-02) paragraphs [0009], [0020], [0031], [0034], [0054], [0081], [0085], [0139], [0141], [0144], [0147] - [0153]; figures 4,5,13,17 -----	1,5, 10-12
Y	WO 00/18333 A (AUTOGENICS [GB]; LANE ERNEST [US]; TOMPKINS DAVID [GB]; HEMSLEY DAVID) 6 April 2000 (2000-04-06) page 7, line 20 - page 8, line 16 -----	3,4
Y	US 2006/259137 A1 (ARTOF JASON [US] ET AL) 16 November 2006 (2006-11-16) figures 52,53 -----	6,7
A	WO 01/54624 A (3F THERAPEUTICS INC [US]) 2 August 2001 (2001-08-02) the whole document -----	1
P,A	US 2008/154355 A1 (BENICHOU NETANEL [IL] ET AL) 26 June 2008 (2008-06-26) the whole document -----	1-14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/046646

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.:

1-14

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: 1-14

Claims 1 - 14 essentially define an implantable prosthetic valve with an expandable frame having commissure posts, an annular skirt inside the frame and a plurality of scalloped leaflets attached to each other by side flaps to form leaflet commissures. Each left commissure is attached to a commissure post and a reinforcing bar is placed against each side flap.

2. claims: 15-19

Claims 15 - 19 essentially define an implantable prosthetic valve with an expandable frame comprising interconnected struts with forma plurality of open cells. The is a leaflet structure supported by the frame and comprising a plurality of leaflets and an annular cover member of silicone covering the cells of at least part of the frame.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2009/046646

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