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Records: 13 (1-13 of 13)
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1. Family 30051958 (US2003209835 AA)

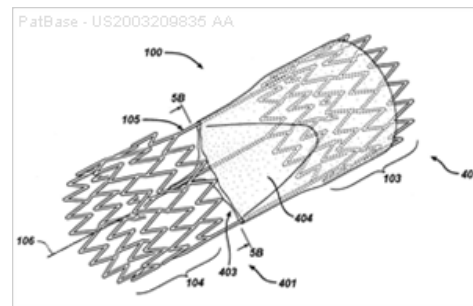
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Title

[EN] METHOD OF FORMING A TUBULAR MEMBRANE ON A STRUCTURAL FRAME

Abstract

[EN] The present invention relates to a medical device and method of forming the medical device. In particular, the present invention relates to a medical device having a tubular membrane structure over a radially expandable structural frame, and to a method of forming the tubular membrane on the radially expandable structural frame. In one aspect, a structural frame is placed over a spinning mandrel and a fiber is electro-statically spun over at least a portion of the structural frame forming a membrane. A transfer sheath may be used between the mandrel and structural frame to prevent the electro-statically spun fiber from adhering to the mandrel. In another aspect, a first membrane is spun over the mandrel before the structural frame is placed over the mandrel. In this aspect, at least a portion of the structural frame is sandwiched between the membranes. The membrane or membranes and structural frame form a fiber spun frame assembly. The fiber spun frame assembly may be coated with an elastic polymer. In addition, the membrane or membranes may go through some post processing to achieve desired characteristics or configurations.



International Class: A61F2/24; A61F2/82; A61L27/00; A61L29/00; A61L31/00; A61F2/06; A61F2/90; A61F2/02; A61F2/915; A61L27/34; A61L27/58; D04H3/07; A61F2/86; A61L27/18; A61L27/54; D01D5/00; D01F6/32; D01F6/84; B29C41/04; B29C41/30; B29C41/44; B29C47/02; B29D23/00; D06M10/00; H05B6/00; A61M29/02; B05D1/18; B29C53/60

Cooperative Patent Class: A61F2/2412; A61F2/2415; A61F2/2418; A61F2/2475; A61F2/915; A61F2002/825; A61F2002/91533; A61F2002/91558; A61F2002/91575; A61F2002/91583; A61F2220/005; A61F2220/0058; A61F2230/0054; A61F2230/0078; A61F2210/0076; A61L2300/00; A61L27/18; A61L27/34; A61L27/54; D01D5/0084; D01F6/32; D01F6/84; D04H3/07

US Class: 264/129; 264/171.12; 264/171.13; 264/171.14; 264/171.15; 264/171.17; 264/171.26; 264/171.27; 264/171.28; 264/171.29; 264/177.14; 264/177.140P; 264/229; 264/229S; 264/313; 264/316; 264/339; 264/339P; 264/465; 427/2.25; 427/2.250S; 623/1.13; 623/1.130P; 623/1.15; 623/1.150P; 623/1.24; 623/1.240P; 623/1.240S; 623/1.44; 623/11.5; 623/12.4; 623/2.18; 623/2.180S; 623/2.38; 623/2.380S; 623/901; 623/901S

Family Information

Patent Number	Publication Date	Application Number	Application Date
AT470406 E	20100615	AT20030724532T	20030508
AU2003225291 AA	20031111	AU20030225291	20030506
AU2003225296 AA	20031111	AU20030225296	20030506
AU2003225296 BB	20081030	AU20030225296	20030506
AU2003228884 AA	20031111	AU20030228884	20030506
AU2003228884 BB	20080731	AU20030228884	20030506
AU2003230363 AA	20031111	AU20030230363	20030508
AU2003231302 AA	20031111	AU20030231302	20030506
AU2003298515 AA	20040504	AU20030298515	20030509
AU2009200209 AA	20090312	AU20090200209	20090119
AU2009200209 BB	20110203	AU20090200209	20090119
AU2009200210 AA	20090219	AU20090200210	20090119
CA2485285 AA	20041109	CA20032485285	20030506
CA2485290 AA	20041109	CA20032485290	20030506
CA2485292 AA	20041109	CA20032485292	20030506
CA2485293 AA	20041109	CA20032485293	20030508
CA2501712 AA	20050407	CA20032501712	20030509
CA2501712 C	20100720	CA20032501712	20030509
CA2512029 AA	20050628	CA20032512029	20030506
DE60332938 D1	20100722	DE20036032938T	20030508
DE60346664 D1	20141002	DE20036046664	20030509
DE60351968 D1	20190509	DE20036051968	20030506
EP1507492 A1	20050223	EP20030722012	20030506
EP1507493 A1	20050223	EP20030722018	20030506
EP1507493 B1	20170215	EP20030722018	20030506

Patent Number	Publication Date	Application Number	Application Date
EP1509171 A1	20050302	EP20030724532	20030508
EP1509171 B1	20100609	EP20030724532	20030508
EP1613241 A1	20060111	EP20030724441	20030506
EP1613241 B1	20191218	EP20030724441	20030506
EP1667603 A1	20060614	EP20030726658	20030506
EP1667603 B1	20171220	EP20030726658	20030506
EP1667604 A2	20060614	EP20030796268	20030509
EP1667604 B1	20140820	EP20030796268	20030509
EP2149349 A2	20100203	EP20080075122	20030506
EP2149349 A3	20100609	EP20080075122	20030506
EP2149349 B1	20190424	EP20080075122	20030506
EP2149350 A2	20100203	EP20080075133	20030506
EP2149350 A3	20100428	EP20080075133	20030506
EP3673872 A1	20200701	EP20190217232	20030506
JP2005525169 T2	20050825	JP20040502885T	20030506
JP2005525170 T2	20050825	JP20040502886T	20030506
JP2005525171 T2	20050825	JP20040502887T	20030506
JP2005525172 T2	20050825	JP20040502889T	20030508
MX278134 B	20100813	MX2004PA11146	20030506
MX281997 B	20101213	MX2004PA11148	20030509
MX282363 B	20101220	MX2004PA11147	20030508
MX294412 B	20120106	MX2004PA11145	20030506
MXPA04011144 A1	20050816	MX2004PA11144	20030506
MXPA04011145 A1	20050701	MX2004PA11145	20030506
MXPA04011146 A1	20050701	MX2004PA11146	20030506
MXPA04011147 A1	20050701	MX2004PA11147	20030508
MXPA04011148 A1	20050816	MX2004PA11148	20030509
US2003209835 AA	20031113	US20030402048	20030328
US2003225447 AA	20031204	US20030430113	20030506
US2003236568 AA	20031225	US20030431967	20030508
US2004019374 AA	20040129	US20030434891	20030509
US2004034408 AA	20040219	US20030401453	20030328
US2004093070 AA	20040513	US20030402180	20030328
US2008036113 AA	20080214	US20070842804	20070821
US7270675 BB	20070918	US20030402048	20030328
US7351256 BB	20080401	US20030402180	20030328
US7485141 BB	20090203	US20030401453	20030328
US7758632 BB	20100720	US20030434891	20030509
US8663541 BB	20140304	US20070842804	20070821
WO03094794 A1	20031120	WO2003US14008	20030506
WO03094795 A1	20031120	WO2003US14009	20030506
WO03094796 A1	20031120	WO2003US14115	20030506
WO03094797 A1	20031120	WO2003US14148	20030506
WO03094799 A1	20031120	WO2003US14530	20030508
WO04034933 A2	20040429	WO2003US15323	20030509
WO04034933 A3	20040708	WO2003US15323	20030509
WO04034933 C2	20040603	WO2003US15323	20030509

Priority Numbers: US20020379604P [20020510]; WO2003US14530 [20030508]; WO2003US14009 [20030506]; US20030401453 [20030328]; WO2003US14115 [20030506]; US20030402180 [20030328]; WO2003US14148 [20030506];

US20030402048 [20030328]; WO2003US14008 [20030506]; WO2003US15323 [20030509]; AU20030230363 [20030508]; AU20090200209 [20090119]; AU20030225291 [20030506]; AU20090200210 [20090119]; EP20030796268 [20030509]; EP20080075122 [20030506]; EP20030722018 [20030506]; EP20030722012 [20030506]; EP20030724441 [20030506]; US20030430113 [20030506]; US20030431967 [20030508]; US20030434891 [20030509]; US20070842804 [20070821]

Probable Patent Assignee: CARDINAL HEALTH SWITZERLAND 515 GMBH

Assignees: CORDIS CORP; CARDINAL HEALTH SWITZERLAND 515 GMBH; CARDINAL HEALTH 529 LLC; GREWE DAVID; MAJERCAK DAVID CHRISTOPHER; CHUN IKSOO; ROLLER MARK B; HOJEIBANE HIKMAT; CARDINAL HEALTH 515 GMBH; JOHNSON AND JOHNSON; MAJERCAK DAVID C

Non Std Assignees: DAVE VIPUL BHUPENDRA; CORDIS CORP FREMONT; ETHICON INC; CORDIS

Inventors: HOJEIBANE HIKMAT; MAJERCAK DAVID; GREWE DAVID; MAJERCAK DAVID CHRISTOPHER; CHUN IKSOO; DAVE VIPUL BHUPENDRA; ROLLER MARK B; MAJERCAK DAVID C

Non Std Inventors: DAVID CHRISTOPHER MAJERCAK; DAVID GREWE; VIPUL BHUPENDRA DAVE; IKSOO CHUN; MARK B ROLLER; HIKMAT HOJEIBANE; MAJERCAK DAVID CHRISTOPHER STEWARTSVILLE; HOJEIBANE HIKMAT PRINCETON; DAVE VIPUL BHUPENDRA HILSBOROUGH; CHUN IKSOO FLEMINGTON; ROLLER MARK B NORTH BRUNSWICK; ROLLER MARK

Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; SPRUSON AND FERGUSON; GRIFFITH HACK; SIM AND MCBURNEY; MARKS AND CLERK; MUELLER BORE AND PARTNER PATENTANWAELTE PARTG MBB; PROCK THOMAS; MARKS AND CLERK LLP; MERCER CHRISTOPHER PAUL; TUNSTALL CHRISTOPHER STEPHEN; CARPMAELS AND RANSFORD LLP; KATO MASANOBU; ARTURO PEREZ ARREDONDO; PHILIP S JOHNSON JOHNSON AND JOHNSON; VINCENT; SERRAO VINCENT J; VINCENT J

Designated States: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR; AE; AG; AL; AM; AU; AZ; BA; BB; BF; BJ; BR; BY; BZ; CA; CF; CG; CI; CM; CN; CO; CR; CU; DM; DZ; EC; GA; GD; GE; GH; GM; GN; GQ; GW; HR; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LV; MA; MD; MG; MK; ML; MN; MR; MW; MX; MZ; NE; NI; NO; NZ; OM; PH; PL; RU; SC; SD; SG; SL; SN; SZ; TD; TG; TJ; TM; TN; TT; TZ; UA; UG; UZ; VC; VN; YU; ZA; ZM; ZW

2. Family 52403460 (US2012296418 AA)

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Title
[EN] ENCAPSULATED HEART VALVE

Abstract
[EN] The present disclosure concerns embodiments of implantable prosthetic devices, and in particular, implantable prosthetic valves, and methods for making such devices. In one aspect, a prosthetic device includes encapsulating layers that extend over a fabric layer and secure the fabric layer to another component of the device. In particular embodiments, the prosthetic device comprises a prosthetic heart valve, and can be configured to be implanted in any of the native heart valves. In addition, the prosthetic heart valve can be, for example, a transcatheter heart valve, a surgical heart valve, or a minimally-invasive heart valve.

International Class: A61F2/02; A61F2/24; A61M39/22; A61F2/00; B23P11/00
Cooperative Patent Class: A61F2/2409; A61F2/2415; A61F2/2418; A61F2002/0086; Y10T29/49826
US Class: 1/1; 156/294; 29/428; 623/2.1; 623/2.17; 623/2.18

Family Information

Patent Number	Publication Date	Application Number	Application Date
CA2835947 AA	20131112	CA20122835947	20120521
CA2835947 C	20170829	CA20122835947	20120521
CN103732183 A	20140416	CN201280034015	20120521
CN103732183 B	20160518	CN201280034015	20120521
DE602012058622 D1	20190425	DE201260058622T	20120521
EP2709563 A1	20140326	EP20120789635	20120521
EP2709563 A4	20150218	EP20120789635	20120521
EP2709563 B1	20190403	EP20120789635	20120521
US10045846 BB	20180814	US20140256747	20140418
US10543080 BB	20200128	US20180102379	20180813
US2012296418 AA	20121122	US20120475210	20120518
US2014209238 AA	20140731	US20140256747	20140418
US2018360598 AA	20181220	US20180102379	20180813
US2020155306 AA	20200521	US20200773860	20200127
US8945209 BB	20150203	US20120475210	20120518
WO12162228 A1	20121129	WO2012US38807	20120521

Priority Numbers: US20110488599P [20110520]; US20120475210 [20120518]; WO2012US38807 [20120521]; EP20120789635 [20120521]; US20140256747 [20140418]; US20180102379 [20180813]; US20200773860 [20200127]

Probable Patent Assignee: EDWARDS LIFESCIENCES CORP

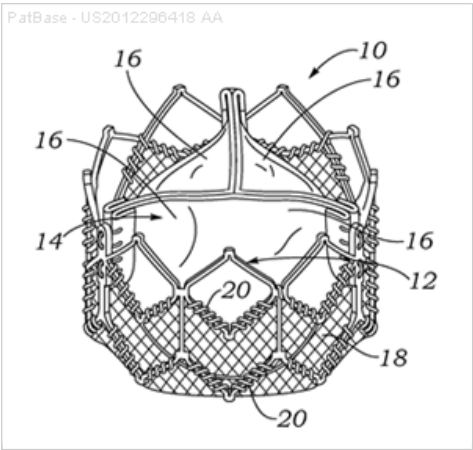
Assignees: WALLS ANDREW L; MIGLIAZZA JOHN F; EDWARDS LIFESCIENCES CORP; PELLED ITAI; BONYUET CELESTE C; BONYUET CELESTE; WALLS ANDREW

Non Std Assignees: EDWARDS LIFESCIENCES CORPORATION

Inventors: WALLS ANDREW L; MIGLIAZZA JOHN F; PELLED ITAI; BONYUET CELESTE C; BONYUET CELESTE; WALLS ANDREW

Agent(s): STIKEMAN ELLIOTT SENCRL SRL LLP; EISENFUEHR SPEISER PATENTANWAELTE RECHTSANWAELTE PARTGMBB; EISENFUEHR SPEISER; CUMBERBATCH GUY; HO PUI TONG; ANNEMARIE; GUY; PUI TONG; KAISER ANNEMARIE ET AL

Designated States: AL; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HR; HU; IE; IS; IT; LI; LT; LU; LV; MC; MK; MT; NL; NO; PL; PT; RO; RS; SE; SI; SK; SM; TR; AE; AG; AM; AO; AU; AZ; BA; BB; BF; BH; BJ; BR; BW; BY; BZ; CA; CF; CG; CI; CL; CM; CN; CO; CR; CU; DM; DO; DZ; EC; EG; GA; GD; GE; GH; GM; GN; GQ; GT; GW; HN; ID; IL; IN; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LY; MA; MD; ME; MG; ML; MN; MR; MW; MX; MY; MZ; NA; NE; NG; NI; NZ; OM; PE; PG; PH; QA; RU; RW; SC; SD; SG; SL; SN; ST; SV; SY; SZ; TD; TG; TH; TJ; TM; TN; TT; TZ; UA; UG; US; UZ; VC; VN; ZA; ZM; ZW



3. Family 7550928 (US4172295 A)

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Title
[EN] TRI-CUSPID THREE-TISSUE PROSTHETIC HEART VALVE

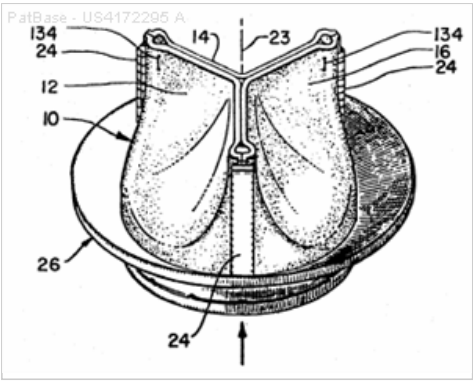
Abstract
[EN] This invention relates to improvements in a tri-cuspid tissue prosthetic heart valve having a valve body with sewing holes provided at each interval between the cusps of the valve, which improvements are realized by the formation of the tissue from three pieces joined together at seams disposed along the intervals between the cusps of the valve.

International Class: A61F2/24; A61F1/22
Cooperative Patent Class: A61F2/2412; A61F2220/0075; Y10S623/90
US Class: 3/1.5; 3/1.500; 623/2.15; 623/900

Family Information

Patent Number	Publication Date	Application Number	Application Date
US4172295 A	19791030	US19780873049	19780127

Priority Numbers: US19780873049 [19780127]
Probable Patent Assignee: SHILEY SCIENT INC
Assignees: SHILEY SCIENT INC
Non Std Assignees: SHILEY SCIENTIFIC INC; SORIN BIOMEDICAL INC
Inventors: BATTEN RICHARD J



4. Family 60549579 (US2017189174 AA)

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Title
[EN] PARAVALVULAR SEALING VIA EXTENDED CUFF MECHANISMS

Abstract
[EN] A prosthetic heart valve **300** may include a collapsible and expandable stent **306** having a proximal end **302**, a distal end **304**, an annulus section adjacent the proximal end, and a plurality of cells connected to one another in annular rows around the stent, a cuff **312** attached to the stent, and a sealing member **322** attached to the cuff and extending from a proximal end **313** of the cuff to a free edge **323**. The sealing member **322** may be movable between an extended condition in which the free edge **323** is located proximally of the proximal end **302** of the stent **306**, and an inverted condition in which the free edge is located distally of the proximal end of the stent and a first surface **324** of the sealing member confronts an outward-facing surface of the cuff. Various mechanisms for moving the sealing member **322** are also described.

International Class: A61F2/24
Cooperative Patent Class: A61F2/2418; A61F2/2436; A61F2/2439; A61F2250/0069
US Class: 1/1; 623/2.11

Family Information

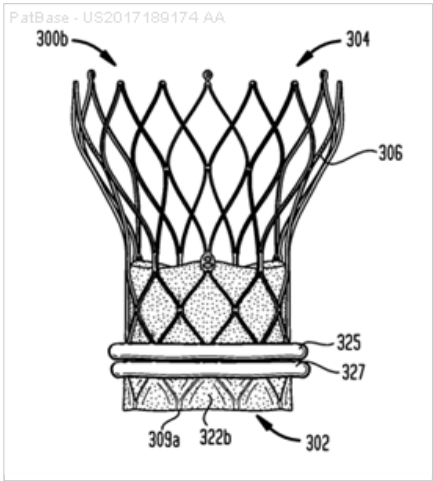
Patent Number	Publication Date	Application Number	Application Date
DE602015060076 D1	20201029	DE201560060076T	20150114
EP3125826 A1	20170208	EP20150703350	20150114
EP3125826 B1	20201007	EP20150703350	20150114
US10143551 BB	20181204	US20150128909	20150114
US10874510 BB	20201229	US20180175164	20181030
US2017189174 AA	20170706	US20150128909	20150114
US2019060065 AA	20190228	US20180175164	20181030
WO15152980 A1	20151008	WO2015US11387	20150114

Priority Numbers: US20140972831P [20140331]; EP20150703350 [20150114]; WO2015US11387 [20150114]; US20150128909 [20150114]; US20180175164 [20181030]; US20160128909 [20160923]

Probable Patent Assignee: ST JUDE MEDICAL CARDIOLOGY DIVISION INC
Assignees: ST JUDE MEDICAL CARDIOLOGY DIV INC; ST JUDE MEDICAL CARDIOLOGY DIV
Non Std Assignees: ST JUDE MEDICAL CARDIOLOGY DIVISION INC

Inventors: BRAIDO PETER N; ALKHATIB YOUSEF F; ANDERL STEVEN FREDERICK; DALY JACOB JOHN; FAHIM MINA S; SMITH KENT J; THOMAS RALPH JOSEPH; THOMAS RALPH J
Agent(s): GILL JENNINGS AND EVERY LLP; LERNER DAVID LITTENBERG KRUMHOLZ AND MENTLIK LLP; LERNER DAVID LITTENBERG KRUMHOLZ AND MENTLIK LLP; KARLIN JOSEPH ET AL; LERNER DAVID LITTENBERG KRUMHOLZ AND MENTLIK LLP

Designated States: AL; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HR; HU; IE; IS; IT; LI; LT; LU; LV; MC; MK; MT; NL; NO; PL; PT; RO; RS; SE; SI; SK; SM; TR; BA; ME; AE; AG; AM; AO; AU; AZ; BB; BF; BH; BJ; BN; BR; BW; BY; BZ; CA; CF; CG; CI; CL; CM; CN; CO; CR; CU; DM; DO; DZ; EC; EG; GA; GD; GE; GH; GM; GN; GQ; GT; GW; HN; ID; IL; IN; IR; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LY; MA; MD; MG; ML; MN; MR; MW; MX; MY; MZ; NA; NE; NG; NI; NZ; OM; PA; PE; PG; PH; QA; RU; RW; SA; SC; SD; SG; SL; SN; ST; SV; SY; SZ; TD; TG; TH; TJ; TM; TN; TT; TZ; UA; UG; US; UZ; VC; VN; ZA; ZM; ZW



5. Family 52070284 (US2012253453 AA)

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Title

[EN] DURABLE HIGH STRENGTH POLYMER COMPOSITE SUITABLE FOR IMPLANT AND ARTICLES PRODUCED THEREFROM

Abstract

[EN] A thin, biocompatible, high-strength, composite material is disclosed that is suitable for use in various implanted configurations. In one aspect, the composite material maintains flexibility in high-cycle flexural applications, making it particularly applicable to high-flex implants such as heart pacing lead or heart valve leaflet. The composite material includes a porous expanded fluoropolymer membrane and an elastomer, wherein the elastomer fills substantially all of the pores of the porous expanded fluoropolymer, and the composite material comprising less than about 80 percent fluoropolymer by weight.

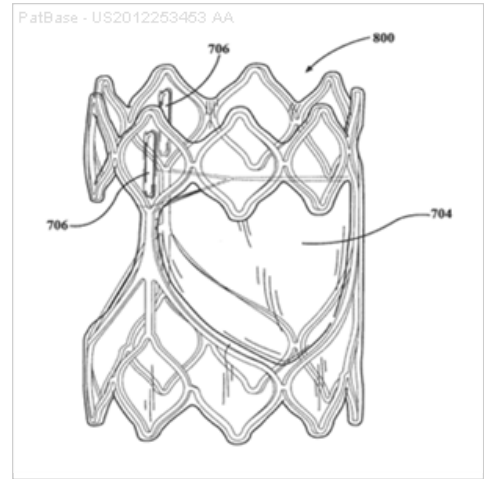
International Class: A61F2/24; A61L27/14; A61L27/40; A61L27/48; A61L27/56; A61L27/16; A61L27/50; C08L27/18; A61L27/34; B32B27/30; B32B37/00; B32B5/18; B32B7/10; A61L27/18; A61F; A61L; C08L; A61L27/00; A61L27/44; C08L27/00; C08F216/14; A61L27/26; C09J123/28; A61F2/02; A61F2/00; B29C55/00; B29C61/00; B29C61/02; A61F2/82; B05D3/00; B05D7/24; B32B37/26; A61L31/02; A61L31/04; A61L27/02

Cooperative Patent Class: A61F2/2412; A61F2/2415; A61F2/2418; A61F2/2469; A61F2/2472; A61F2/2475; A61F2210/0076; A61F2220/005; A61F2230/00; A61F2230/0006; A61F2230/0013; A61F2230/0054; A61L2430/20; A61L27/00; A61L27/025; A61L27/14; A61L27/40; A61L27/48; A61L27/50; A61L27/507; A61L27/56; A61F2/2403; A61F2210/00; A61F2240/001; A61F2240/005; A61L2420/04; A61L2420/08; A61L27/34; Y10T29/49412; A61F2250/0018; A61F2250/0029; A61L27/16; C08F214/262; C08F216/1408; C08L27/18; A61F2220/0075; A61F2/2433; A61L27/18; A61F2/24; A61F2/2427; A61L27/26; C09J123/28; C08L27/12; Y10T156/10; B29C55/005; B29C61/02; A61F2250/0098; A61F2250/0096; A61L2300/44

US Class: 1/1; 156/185; 156/189; 156/304.1; 156/309.6; 156/331.7; 156/60; 156/70; 29/890.124; 427/2.25; 427/385.5; 521/145; 623/1.24; 623/2.12; 623/2.17; 623/2.18; 623/2.42

Family Information

Patent Number	Publication Date	Application Number	Application Date
AU2012236318 AA	20130919	AU20120236318	20120330
AU2012236318 BB	20150423	AU20120236318	20120330
AU2012261921 AA	20140109	AU20120261921	20120601
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AU2018201999 BB	20190718	AU20180201999	20180321
AU2018203416 AA	20180607	AU20180203416	20180515
AU2018203416 BB	20191212	AU20180203416	20180515
AU2018208663 AA	20180809	AU20180208663	20180724
AU2018264049 AA	20181206	AU20180264049	20181114
AU2018264049 BB	20200806	AU20180264049	20181114



Patent Number	Publication Date	Application Number	Application Date
AU2019200491 AA	20190214	AU20190200491	20190124
AU2020201784 AA	20200326	AU20200201784	20200311
AU2020204354 AA	20200716	AU20200204354	20200629
AU2020250227 AA	20201105	AU20200250227	20201007
BR112013025114 A2	20210105	BR20131125114	20120330
BR112013030992 A2	20170822	BR20131130992	20120601
BR112013030992 B1	20210126	BR20131130992	20120601
BR112017016552 A2	20180410	BR20171116552	20150728
CA2830355 AA	20130913	CA20122830355	20120330
CA2830355 C	20190423	CA20122830355	20120330
CA2837098 AA	20131121	CA20122837098	20120601
CA2837098 C	20170509	CA20122837098	20120601
CA2900656 AA	20150807	CA20142900656	20140214
CA2900656 C	20210511	CA20142900656	20140214
CA2900676 AA	20150807	CA20142900676	20140219
CA2900805 AA	20150810	CA20142900805	20140218
CA2900805 C	20190813	CA20142900805	20140218
CA2902814 AA	20150827	CA20142902814	20140214
CA2966238 AA	20121206	CA20122966238	20120601
CA2966238 C	20190702	CA20122966238	20120601
CA2973346 AA	20170707	CA20152973346	20150728
CA2973346 C	20210720	CA20152973346	20150728
CA3039324 AA	20121004	CA20123039324	20120330
CA3042538 AA	20121206	CA20123042538	20120601
CA3049221 AA	20141002	CA20143049221	20140218
CN103458934 A	20131218	CN201280016600	20120330
CN103458934 B	20170215	CN201280016600	20120330
CN103702636 A	20140402	CN201280036405	20120601
CN103702636 B	20170609	CN201280036405	20120601
CN105007955 A	20151028	CN201480014136	20140214
CN105007955 B	20180622	CN201480014136	20140214
CN105050544 A	20151111	CN201480015174	20140219
CN105188782 A	20151223	CN201480014297	20140218
CN105188782 B	20171117	CN201480014297	20140218
CN105188788 A	20151223	CN201480014208	20140214
CN105999422 A	20161012	CN201610349584	20120601
CN105999422 B	20200403	CN201610349584	20120601
CN106668949 A	20170517	CN201710014101	20120330
CN106668949 B	20210101	CN201710014101	20120330
CN107206122 A	20170926	CN201580075853	20150728
CN107206122 B	20201103	CN201580075853	20150728
CR20170386 A	20171019	CR20170000386	20150728
DE602012035305 D1	20170914	DE201260035305T	20120601
DE602012042363 D1	20180301	DE201260042363T	20120330
DE602014031702 D1	20181004	DE201460031702T	20140214
DE602014063117 D1	20200423	DE201460063117T	20140218
DE602014063368 D1	20200416	DE201460063368T	20140214
DE602015064745 D1	20210204	DE201560064745T	20150728

Patent Number	Publication Date	Application Number	Application Date
EP2694123 A2	20140212	EP20120764638	20120330
EP2694123 A4	20141119	EP20120764638	20120330
EP2694123 B1	20180124	EP20120764638	20120330
EP2713954 A1	20140409	EP20120727514	20120601
EP2713954 B1	20170802	EP20120727514	20120601
EP2967850 A1	20160120	EP20140708735	20140219
EP2968663 A1	20160120	EP20140709466	20140218
EP2968663 B1	20200401	EP20140709466	20140218
EP2968674 A1	20160120	EP20140707901	20140214
EP2968674 B1	20180905	EP20140707901	20140214
EP2968675 A1	20160120	EP20140707902	20140214
EP3251633 A1	20171206	EP20170176541	20120601
EP3256178 A1	20171220	EP20150756503	20150728
EP3256178 B1	20210113	EP20150756503	20150728
EP3323439 A1	20180523	EP20180150364	20120330
EP3459498 A1	20190327	EP20180192192	20140214
EP3459498 B1	20200401	EP20180192192	20140214
EP3679955 A1	20200715	EP20200159436	20140218
ES2643173 T3	20171121	ES20120727514T	20120601
ES2663094 T3	20180411	ES20120764638T	20120330
ES2701197 T3	20190221	ES20140707901T	20140214
ES2801328 T3	20210111	ES20180192192T	20140214
ES2860899 T3	20211005	ES20150756503T	20150728
HK1188574 A1	20140509	HK20140101615	20140220
HK1188574 B	20181123	HK20140101615	20140220
HK1196242 A1	20141212	HK20140109683	20140926
HK1196242 B	20180608	HK20140109683	20140926
HK1215999 A1	20161007	HK20160103928	20160407
HK1216084 A1	20161014	HK20160104073	20160411
HK1216084 B	20210115	HK20160104073	20160411
HK1216086 A1	20161014	HK20160104135	20160412
HK1216087 A1	20161014	HK20160104136	20160412
HK1216087 B	20191004	HK20160104136	20160412
HK1246143 A1	20180907	HK20180105824	20180507
HK1246698 A1	20180914	HK20180105989	20180509
HK1254143 A1	20190712	HK20180113214	20181016
HK40004911 A1	20200429	HK20190128418	20190820
HK40004911 B	20210122	HK20190128418	20190820
IN07038CN2013 A	20140912	IN2013CN07038	20130902
IN09494CN2013 A	20150227	IN2013CN09494	20131127
JP2014517720 T2	20140724	JP20140502831T	20120330
JP2014524767 T2	20140925	JP20140513758T	20120601
JP2016510641 T2	20160411	JP20160500284T	20140218
JP2016510645 T2	20160411	JP20160500300T	20140219
JP2016512065 T2	20160425	JP20160500266T	20140214
JP2016514011 T2	20160519	JP20160500269T	20140214
JP2017070771 A2	20170413	JP20160230107	20161128
JP2018507039 T2	20180315	JP20170542435T	20150728

Patent Number	Publication Date	Application Number	Application Date
JP2019000669 A2	20190110	JP20180153634	20120330
JP2019058722 A2	20190418	JP20180229231	20140214
JP2019103823 A2	20190627	JP20190017385	20140218
JP5785326 B2	20150930	JP20140513758T	20120601
JP6051202 B2	20161227	JP20140502831T	20120330
JP6426680 B2	20181121	JP20160230107	20161128
JP6449842 B2	20190109	JP20160500266T	20140214
JP6599845 B2	20191030	JP20160500284T	20140218
JP6725601 B2	20200722	JP20180153634	20120330
JP6813494 B2	20210113	JP20170542435T	20150728
JP6826093 B2	20210203	JP20180229231	20140214
KR101946595 B1	20190211	KR20137035167	20120601
KR101994463 B1	20190701	KR20137027469	20120330
KR101999508 B1	20190711	KR20197003305	20120601
KR102100082 B1	20200413	KR20197018244	20120330
KR20140016339 A	20140207	KR20137027469	20120330
KR20140034878 A	20140320	KR20137035167	20120601
KR20150126655 A	20151112	KR20157027499	20140218
KR20150127127 A	20151116	KR20157026307	20140214
KR20150127222 A	20151116	KR20157028305	20140214
KR20150130300 A	20151123	KR20157025135	20140219
KR20190018734 A	20190225	KR20197003305	20120601
KR20190092453 A	20190807	KR20197018244	20120330
RU2013148783 A	20150510	RU20130148783	20120330
RU2013157353 A	20150720	RU20130157353	20120601
US10022219 BB	20180717	US20150724672	20150528
US10342658 BB	20190709	US20170583766	20170501
US10470878 BB	20191112	US20170419823	20170130
US10548724 BB	20200204	US20170713316	20170922
US10653518 BB	20200519	US20150598979	20150116
US10993803 BB	20210504	US20170661549	20170727
US2012253453 AA	20121004	US20110078774	20110401
US2012323315 AA	20121220	US20120485823	20120531
US2013166021 AA	20130627	US20130750649	20130125
US2013197631 AA	20130801	US20130801701	20130313
US2013325117 AA	20131205	US20130798595	20130313
US2014163671 AA	20140612	US20140183251	20140218
US2014163673 AA	20140612	US20140182044	20140217
US2014180402 AA	20140626	US20140181965	20140217
US2015135537 AA	20150521	US20150598979	20150116
US2015144262 AA	20150528	US20150598587	20150116
US2015224231 AA	20150813	US20150622599	20150213
US2015257875 AA	20150917	US20150724640	20150528
US2015257876 AA	20150917	US20150724672	20150528
US2017231758 AA	20170817	US20170583766	20170501
US2017239042 AA	20170824	US20170419823	20170130
US2017319338 AA	20171109	US20170661549	20170727
US2018008406 AA	20180111	US20170713316	20170922

Patent Number	Publication Date	Application Number	Application Date
US2018200050 AA	20180719	US20180891131	20180207
US2019133759 A9	20190509	US20170583766	20170501
US2019269506 AA	20190905	US20190415591	20190517
US2020069418 AA	20200305	US20190679056	20191108
US2020138571 AA	20200507	US20190719621	20191218
US2021228351 AA	20210729	US20210230702	20210414
US8945212 BB	20150203	US20120485823	20120531
US8961599 BB	20150224	US20110078774	20110401
US9554900 BB	20170131	US20130798595	20130313
US9744033 BB	20170829	US20140181965	20140217
US9770327 BB	20170926	US20150598587	20150116
US9795475 BB	20171024	US20150724640	20150528
US9801712 BB	20171031	US20150622599	20150213
WO12135603 A2	20121004	WO2012US31417	20120330
WO12135603 A3	20121206	WO2012US31417	20120330
WO12167131 A1	20121206	WO2012US40529	20120601
WO14143498 A1	20140918	WO2014US16581	20140214
WO14149295 A1	20140925	WO2014US16794	20140218
WO14149319 A1	20140925	WO2014US17118	20140219
WO14158444 A1	20141002	WO2014US16807	20140218
WO14163795 A1	20141009	WO2014US16550	20140214
WO16130173 A1	20160818	WO2015US42530	20150728

Priority Numbers: US20110078774 [20110401]; WO2012US31417 [20120330]; US20110492324P [20110601]; US20120485823 [20120531]; WO2012US40529 [20120601]; US20130801701 [20130313]; WO2014US16581 [20140214]; US20130800402P [20130315]; US20140183251 [20140218]; WO2014US17118 [20140219]; US20130779891P [20130313]; US20140181965 [20140217]; WO2014US16807 [20140218]; US20130798595 [20130313]; WO2014US16550 [20140214]; AU20120236318 [20120330]; AU20150204380 [20150717]; US20150622599 [20150213]; WO2015US42530 [20150728]; US20120485283 [20120531]; AU20120261921 [20120601]; AU20160202250 [20160412]; AU20140250034 [20140214]; AU20160269391 [20161205]; AU20170200929 [20170210]; AU20140242213 [20140218]; AU20170201104 [20170217]; AU20170201106 [20170217]; AU20170201482 [20170303]; AU20180201999 [20180321]; AU20180203416 [20180515]; AU20180208663 [20180724]; AU20180264049 [20181114]; AU20150382370 [20150728]; AU20190200491 [20190124]; AU20200201784 [20200311]; AU20200204354 [20200629]; AU20200250227 [20201007]; CA20172837098 [20170518]; CA20122837098 [20120601]; CA20122830355 [20120330]; CA20122966238 [20120601]; CA20142900805 [20140218]; CN201280036405 [20120601]; CN201280016600 [20120330]; EP20120727514 [20120601]; EP20120764638 [20120330]; EP20140707901 [20140214]; EP20140709466 [20140218]; EP20180192192 [20140214]; EP20150756503 [20150728]; JP20140502831T [20120330]; JP20160230107 [20161128]; JP20160230107 [20120330]; JP20180153634 [20180817]; JP20160500266T [20140214]; JP20180229231 [20181206]; JP20160500284T [20140218]; JP20190017385 [20190201]; US20150724672 [20150528]; US20150598979 [20150116]; US20170583766 [20170501]; US20170419823 [20170130]; US20170713316 [20170922]; US20170661549 [20170727]; US20130750649 [20130125]; US20140182044 [20140217]; US20130887089P [20131004]; US20150598587 [20150116]; US20150724640 [20150528]; US20180891131 [20180207]; US20190415591 [20190517]; US20190679056 [20191108]; US20190719621 [20191218]; US20210230702 [20210414]

Probable Patent Assignee: W L GORE AND ASSOCIATES INC

Assignees: GORE AND ASS; W L GORE AND ASSOCIATES INC; HARTMAN CODY L; GASSLER PAUL D; BRUCHMAN WILLIAM C; WALSH PETER J; WHITE CHARLES F; GORE AND; WL GORE AND ASS INC; GORE ENTERPRISE HOLDINGS INC; W L GORE AND ASS INC

Non Std Assignees: WL GORE AND ASSOCIATES INC; FINNEY BILL R; WL GORE AND ASSOCIATES INC NEWARK

Inventors: WALSH PETER J; BRUCHMAN WILLIAM C; GASSLER PAUL D; WHITE CHARLES F; HARTMAN CODY L; FINNEY BILL R; WILLIAM C BRUCHMAN; PAUL D GASSLER; CODY L HARTMAN; PETER J WALSH; CHARLES F WHITE; BILL R FINNEY; WILLIAM; BRUCHMAN; BRUCHMAN WILLIAM; GASSLER PAUL; HARTMAN CODY; WALSH PETER; WHITE CHARLES; FINNEY BILL

Non Std Inventors: BRUCHMAN WILLIAM C CAMP VERDE; HARTMAN CODY L FLAGSTAFF; BRUCHMAN WILLIAM C NEWARK; GASSLER PAUL D NEWARK; HARTMAN CODY L NEWARK; WALSH PETER J NEWARK; WHITE CHARLES F NEWARK; BRUCHMAN WILLIAM C DELAWARE; GASSLER PAUL D DELAWARE; HARTMAN CODY L DELAWARE; WALSH PETER J DELAWARE; WHITE CHARLES F DELAWARE

Agent(s): GRIFFITH HACK; GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; SHANKS ANDREW; MARKS AND CLERK LLP; HGF LTD; HGF; LEHMANN MARIA ISABEL; MARIA ISABEL LEHMANN NOVO; MARKS AND CLERK;

HONG KONG UNITALEN INTELLECTUAL PROPERTY AGENCY LTD; UNITALEN ATTORNEYS AT LAW LTD; AOKI ATSUSHI; ISHIDA TAKASHI; KOGA TETSUJI; FUKUMOTO TSUMORU; PAUL J; FORDENBACHER ESQ PAUL J; FORDENBACHER PAUL ET AL; WL GORE AND ASSOCIATES INC; FORDENBACHER PAUL J ET AL; WL GORE AND ASSOCIATES INC; FORDENBACHER PAUL J; W L GORE AND ASSOCIATES INC

Designated States: AL; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HR; HU; IE; IS; IT; LI; LT; LU; LV; MC; MK; MT; NL; NO; PL; PT; RO; RS; SE; SI; SK; SM; TR; BA; ME; AE; AG; AM; AO; AU; AZ; BB; BF; BH; BJ; BR; BW; BY; BZ; CA; CF; CG; CI; CL; CM; CN; CO; CR; CU; DM; DO; DZ; EC; EG; GA; GD; GE; GH; GM; GN; GQ; GT; GW; HN; ID; IL; IN; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LY; MA; MD; MG; ML; MN; MR; MW; MX; MY; MZ; NA; NE; NG; NI; NZ; OM; PE; PG; PH; QA; RU; RW; SC; SD; SG; SL; SN; ST; SV; SY; SZ; TD; TG; TH; TJ; TM; TN; TT; TZ; UA; UG; US; UZ; VC; VN; ZM; ZW; ZA; BN; IR; PA; SA

6. Family 50758211 (US2012059458 AA)

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Title
[EN] CARDIAC VALVE SUPPORT STRUCTURE

Abstract
[EN] Cardiac valve supports and their methods of use.

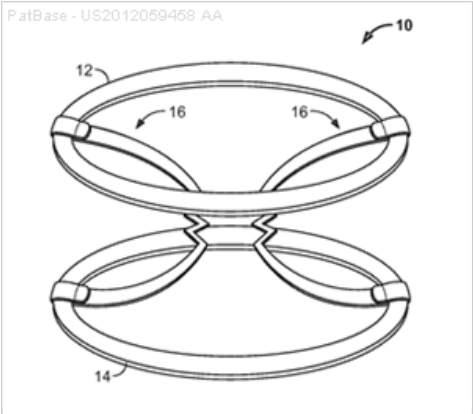
International Class: A61F2/24; A61M29/02; A61M31/00; A61F2/82; A61F2/852

Cooperative Patent Class: A61F2/2409; A61F2/2412; A61F2/2415; A61F2/2418; A61F2/2433; A61F2/2436; A61F2/2442; A61F2/2445; A61F2/2466; A61F2210/0014; A61F2220/0025; A61F2230/0006; A61F2230/001; A61F2230/0069; A61F2250/0036; A61F2250/0039; A61F2250/006; A61F2250/0069; A61F2250/0098; A61F2220/0008; A61F2220/0016; A61F2230/0054; A61F2230/0078; A61F2220/0058; A61F2220/0066; A61F2250/0059; A61F2250/0063; A61F2/246; A61F2/243; A61F2/2427; A61F2/2454; A61F2/852; A61F2002/826; A61F2/24

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Family Information

Patent Number	Publication Date	Application Number	Application Date
AU2011295854 AA	20130321	AU20110295854	20110901
AU2011295854 BB	20160721	AU20110295854	20110901
AU2013227235 AA	20140911	AU20130227235	20130228
AU2013227235 BB	20171019	AU20130227235	20130228
AU2013245201 AA	20141023	AU20130245201	20130404
AU2013245201 BB	20171005	AU20130245201	20130404
BR112014021300 A2	20170620	BR20141121300	20130228
BR112014021300 A8	20170718	BR20141121300	20130228
CA2809909 AA	20130227	CA20112809909	20110901
CA2865074 AA	20140820	CA20132865074	20130228
CA2869365 AA	20141002	CA20132869365	20130404
CN103237523 A	20130807	CN201180052374	20110901
CN104334119 A	20150204	CN201380021090	20130228
CN104334119 B	20161012	CN201380021090	20130228
CN104507416 A	20150408	CN201380029191	20130404
CN104507416 B	20161130	CN201380029191	20130404
CN105263441 A	20160120	CN201480016079	20140116
CN105578991 A	20160511	CN201480042693	20140527
CN105578991 B	20171114	CN201480042693	20140527
CN107411848 A	20171201	CN201611111470	20140116
DE602011043648 D1	20171228	DE201160043648T	20110901
DE602013036863 D1	20180524	DE201360036863T	20130228
DE602013038137 D1	20180705	DE201360038137T	20130404
EP2611391 A2	20130710	EP20110822677	20110901
EP2611391 A4	20150916	EP20110822677	20110901
EP2611391 B1	20171122	EP20110822677	20110901
EP2819618 A1	20150107	EP20130717984	20130228
EP2819618 B1	20180502	EP20130717984	20130228
EP2833836 A1	20150211	EP20130724889	20130404
EP2833836 B1	20180530	EP20130724889	20130404
EP2945572 A1	20151125	EP20140707463	20140116
EP3003220 A1	20160413	EP20140737013	20140527
EP3174503 A1	20170607	EP20150759549	20150730



Patent Number	Publication Date	Application Number	Application Date
EP3182933 A1	20170628	EP20150778057	20150818
IN00534KN2013 A	20130705	IN2013KN00534	20130228
IN01786KN2014 A	20151030	IN2014KN01786	20140825
JP2013539395 T2	20131024	JP20130527323T	20110901
JP2015508004 A2	20150316	JP20140558268	20130228
JP2015508004 T2	20150316	JP20140558268T	20130228
JP2016503710 T2	20160208	JP20150553224T	20140116
JP2016523606 T2	20160812	JP20160516304T	20140527
JP5970458 B2	20160817	JP20130527323T	20110901
US10105224 BB	20181023	US20130790174	20130308
US2012059458 AA	20120308	US20110224124	20110901
US2013304197 AA	20131114	US20130779326	20130227
US2014005778 AA	20140102	US20130790174	20130308
US2014200662 AA	20140717	US20140156055	20140115
US2015094802 AA	20150402	US20140471575	20140828
US2016106539 AA	20160421	US20140893267	20140527
US2017216024 AA	20170803	US20150501023	20150730
US2017273782 AA	20170928	US20150505392	20150818
US9265606 BB	20160223	US20110224124W	20110901
US9301836 BB	20160405	US20110224124	20110901
WO12031141 A2	20120308	WO2011US50232	20110901
WO12031141 A3	20120607	WO2011US50232	20110901
WO13128436 A1	20130906	WO2013IL00025	20130228
WO13150512 A1	20131010	WO2013IL00036	20130404
WO14111918 A1	20140724	WO2014IL00004	20140116
WO14111918 A9	20150917	WO2014IL00004	20140116
WO14191994 A1	20141204	WO2014IL50476	20140527
WO16020918 A1	20160211	WO2015IL50786	20150730
WO16027272 A1	20160225	WO2015IL50836	20150818

Priority Numbers: US20100379235P [20100901]; WO2011US50232 [20110901]; US20120604083P [20120228]; US20120620679P [20120405]; US20130752994P [20130116]; US20130752996P [20130116]; US20120639924P [20120429]; US20120650559P [20120523]; WO2013IL00025 [20130228]; US20120646332P [20120513]; US20120720666P [20121031]; WO2013IL00036 [20130404]; US20130835588P [20130616]; WO2014IL00004 [20140116]; US20130828203P [20130529]; WO2014IL50476 [20140527]; CN201480016079 [20140116]; EP20110822677 [20110901]; EP20130717984 [20130228]; EP20130724889 [20130404]; US20140032581P [20140803]; WO2015IL50786 [20150730]; US20140039937P [20140821]; WO2015IL50836 [20150818]; US20110224124 [20110901]; US20130790174 [20130308]; US20120604103P [20120228]; US20130779326 [20130227]; US20140156055 [20140115]; US20140471575 [20140828]; US20140893267 [20140527]; US20150501023 [20150730]; US20150505392 [20150818]

Probable Patent Assignee: MVALVE TECHNOLOGIES LTD

Assignees: MVALVE TECHNOLOGIES LTD; MVALVE TECH LTD; BUCHBINDER MAURICE; LOGAN JULIE A; VALVE TECHNOLOGIES LTD M; VALVE TECH LTD M

Non Std Assignees: EFTEL AVI; MVALVE TECHNOLOGIES LTD11 GALGALEI HAPLADA4572211HERZLIYAIL; TUBISHEVITZ AMIT; DUBI SHAY; LOGAN JULIE; MVALVE TECHNOLOGIES LTD11 GALGALEI HAPLADA4672211HERZLIYAIL; M VALVE TECHNOLOGIES LTD; BSC INT HOLDING LTD

Inventors: BUCHBINDER MAURICE; LOGAN JULIE A; EFTEL AVI; TUBISHEVITZ AMIT; DUBI SHAY; LOGAN JULIE; BERNSHTEIN VADIM; GEVA AVNER

Non Std Inventors: MAURICE BUCHBINDER; SHAY DUBI; AMIT TUBISHEVITZ; AVI EFTEL; EFTEL AVIIL; TUBISHEVITZ AMITIL; DUBI SHAYUS; BUCHBINDER MAURICEUS; LOGAN JULIEUS; DUBI SHAYIL; BUCHBINDER MAURICE SAN DIEGO; LOGAN JULIE A SAN DIEGO; BUCHBINDER MAURICE LA JOLLA; LOGAN JULIE LA JOLLA

Agent(s): K AND L GATES; MICHAEL BUCK IP; MINTER ELLISON; SMART AND BIGGAR; VIERING JENTSCHURA AND PARTNER MBB PATENT U RECHTSANWAELTE; TURNER CRAIG ROBERT; AA THORNTON AND CO; PAULRAJ LEONITA THERESA; KAWAGUTI AND PARTNERS; NIXON AND VANDERHYE PC; NIXON AND VANDERHYE PC; ZLOGAR THOMAS M ET AL; SHAY GLENN LLP; PYERNIK RUTMAN ET AL; LAPIDOT ARIEL ET AL; PYERNIK MOSHE ET AL

Designated States: AL; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HR; HU; IE; IS; IT; LI; LT; LU; LV; MC; MK; MT; NL; NO; PL; PT; RO; RS; SE; SI; SK; SM; TR; BA; ME; AE; AG; AM; AO; AU; AZ; BB; BF; BH; BJ; BR; BW; BY; BZ; CA; CF; CG; CI; CL; CM; CN; CO; CR; CU; DM; DO; DZ; EC; EG; GA; GD; GE; GH; GM; GN; GQ; GT; GW; HN; ID; IL; IN; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LY; MA; MD; MG; ML; MN; MR; MW; MX; MY; MZ; NA; NE; NG; NI; NZ; OM; PE; PG; PH; QA; RU; RW; SC; SD; SG; SL; SN; ST; SV; SY; SZ; TD; TG; TH; TJ; TM; TN; TT; TZ; UA; UG; US; UZ; VC; VN; ZA; ZM; ZW; BN; PA; IR; SA

7. Family 57086025 (US2014214158 AA)

[View in PatBase](#)

Title
[EN] SURGICAL HEART VALVE FLEXIBLE STENT FRAME STIFFENER

Abstract
[EN] A prosthetic heart valve includes an annular frame having annularly spaced commissure portions and an annulus portion disposed near an inflow edge, a fabric covering at least a portion of the frame and a valve assembly connected to the frame at the commissure portions, the valve assembly including a plurality of leaflets. A stiffening member is disposed about the frame to limit ovalization of the frame when a radial force is applied to the frame.

International Class: A61F2/24

Cooperative Patent Class: A61F2/2409; A61F2/2418; A61F2220/0075; A61F2250/0018

US Class: 1/1; 623/2.14

Family Information

Patent Number	Publication Date	Application Number	Application Date
AU2014212800 AA	20140807	AU20140212800	20140121
AU2014212800 BB	20170302	AU20140212800	20140121
BR112015017812 A2	20170711	BR20151117812	20140121
CA2898987 AA	20150722	CA20142898987	20140121
CA2898987 C	20170627	CA20142898987	20140121
EP2950750 A1	20151209	EP20140703491	20140121
JP2016504154 T2	20160212	JP20150555208T	20140121
US2014214158 AA	20140731	US20130752915	20130129
US9655719 BB	20170523	US20130752915	20130129
WO14120507 A1	20140807	WO2014US12238	20140121

Priority Numbers: US20130752915 [20130129]; WO2014US12238 [20140121]

Probable Patent Assignee: ST JUDE MEDICAL CARDIOLOGY DIVISION INC

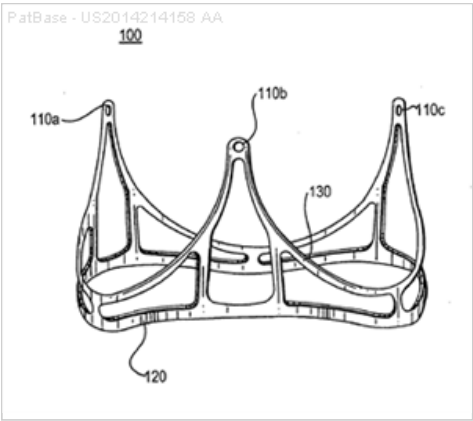
Assignees: ST JUDE MEDICAL CARDIOLOGY DIV; ST JUDE MEDICAL CARDIOLOGY DIVISION; ST JUDE MEDICAL; ST JUDE MEDICAL CARDIOLOGY DIV INC; INC ST JUDE MEDICAL CARDIOLOGY DIVISION

Non Std Assignees: ST JUDE MEDICAL CARDIOLOGY DIVISION INC; AMBRUS JEFFREY R; BOARD STEPHANIE M; CHALEKIAN AARON J; SMITH JOSEPH D; VUE MAI S; WOJCIK DEBORAH A

Inventors: BOARD STEPHANIE M; WOJCIK DEBORAH A; CHALEKIAN AARON J; SMITH JOSEPH D; VUE MAI S; AMBRUS JEFFREY R; STEPHANIE M BOARD; JEFFREY R AMBRUS; JOSEPH D SMITH; DEBORAH A WOJCIK; MAI S VUE; AARON J CHALEKIAN; SMITH JOSEPH DONALD; AMBRUS JEFFREY ROSS; BOARD STEPHANIE MARIE; VUE MAI SIA; WOJCIK DEBORAH ANN

Agent(s): FB RICE; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; FB RICE PTY LTD; MOFFAT AND CO; LUMSDEN KATHARINE ELIZABETH; GILL JENNINGS AND EVERY LLP; LERNER DAVID LITTENBERG KRUMHOLZ AND MENTLIK LLP; RENDOS THOMAS A

Designated States: AL; AT; BA; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HR; HU; IE; IS; IT; LI; LT; LU; LV; MC; ME; MK; MT; NL; NO; PL; PT; RO; RS; SE; SI; SK; SM; TR; AE; AG; AM; AO; AU; AZ; BB; BF; BH; BJ; BN; BR; BW; BY; BZ; CA; CF; CG; CI; CL; CM; CN; CO; CR; CU; DM; DO; DZ; EC; EG; GA; GD; GE; GH; GM; GN; GQ; GT; GW; HN; ID; IL; IN; IR; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LY; MA; MD; MG; ML; MN; MR; MW; MX; MY; MZ; NA; NE; NG; NI; NZ; OM; PA; PE; PG; PH; QA; RU; RW; SA; SC; SD; SG; SL; SN; ST; SV; SY; SZ; TD; TG; TH; TJ; TM; TN; TT; TZ; UA; UG; US; UZ; VC; VN; ZA; ZM; ZW

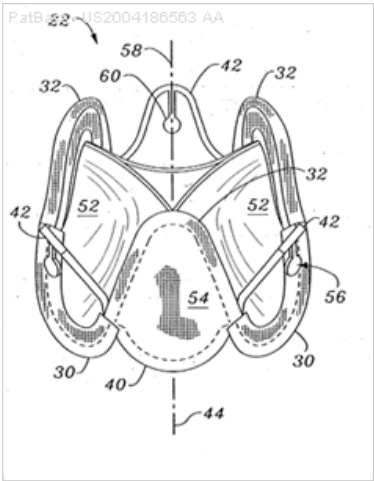


8. Family 30975520 (US2004186563 AA)

[View in PatBase](#)

Title
[EN] MINIMALLY-INVASIVE HEART VALVE WITH CUSP POSITIONERS

Abstract
[EN] A prosthetic heart valve having an internal support frame with a continuous, undulating leaflet frame defined therein. The leaflet frame has three cusp regions positioned at an inflow end intermediate three commissure regions positioned at an outflow end thereof. The leaflet frame may be cloth covered and flexible leaflets attached thereto form occluding surfaces of the valve. The support frame further includes three cusp positioners rigidly fixed with respect to the leaflet frame and located at the outflow end of the support frame intermediate each pair of adjacent commissure regions. The valve is desirably compressible so as to be delivered in a minimally invasive manner through a catheter to the site of implantation. Upon expulsion from catheter, the valve expands into contact with the surrounding native valve annulus and is anchored in place without the use of sutures. In the aortic valve position, the cusp positioners angle outward into contact with the sinus cavities, and compress the native leaflets if they are not excised, or the aortic wall if they are. The support frame may be formed from a flat sheet of Nitinol that is bent into a three-dimensional configuration and heat set. A holder having spring-like arms connected to inflow projections of the valve may be used to deliver, reposition and re-collapse the valve, if necessary.



International Class: A61B17/22; A61F2/24; A61B17/221; A61F2/95

Cooperative Patent Class: A61B17/221; A61F2/2412; A61F2/2418; A61F2/2427; A61F2/243; A61F2/2436; A61F2/9522; A61F2/9525; A61F2220/0016; A61F2220/0066; A61F2220/0075

US Class: 1/1; 623/1.26; 623/2.11; 623/2.110P; 623/2.14; 623/2.18; 623/2.180S; 623/2.19

Family Information

Patent Number	Publication Date	Application Number	Application Date
AT538761 E	20120115	AT20040757521T	20040317
DE602004035890 D1	20120301	DE200460035890T	20040317
DE602004040906 D1	20130321	DE200460040906T	20040317
DK1603493 T3	20120206	DK20040757521T	20040317
DK2241287 T3	20130218	DK20100164361T	20040317
DK2241287 T5	20130916	DK20100164361T	20040317
EP1603493 A2	20051214	EP20040757521	20040317
EP1603493 B1	20111228	EP20040757521	20040317
EP2241287 A1	20101020	EP20100164361	20040317
EP2241287 B1	20130123	EP20100164361	20040317
EP2241287 B2	20200311	EP20100164361	20040317
ES2375133 T3	20120227	ES20040757521T	20040317
ES2402881 T3	20130510	ES20100164361T	20040317
ES2402881 T5	20201124	ES20100164361T	20040317
US10159567 BB	20181225	US20170670778	20170807
US10299925 BB	20190528	US20170641991	20170705
US11234815 BB	20220201	US20190422749	20190524
US2004186563 AA	20040923	US20030390951	20030318
US2008269878 AA	20081030	US20080170341	20080709
US2013096671 AA	20130418	US20120648119	20121009
US2013096674 AA	20130418	US20120653201	20121016
US2016184094 AA	20160630	US20160061895	20160304
US2016338827 AA	20161124	US20160138115	20160425
US2017296333 AA	20171019	US20170641991	20170705
US2017333182 AA	20171123	US20170670778	20170807
US2018092741 AA	20180405	US20170832633	20171205
US2019274827 AA	20190912	US20190422749	20190524

Patent Number	Publication Date	Application Number	Application Date
US2022151772 AA	20220519	US20220586665	20220127
US7399315 BB	20080715	US20030390951	20030318
US8778018 BB	20140715	US20080170341	20080709
US9320598 BB	20160426	US20120648119	20121009
US9504567 BB	20161129	US20120653201	20121016
US9675455 BB	20170613	US20160061895	20160304
US9724193 BB	20170808	US20160138115	20160425
WO04082527 A2	20040930	WO2004US08053	20040317
WO04082527 A3	20041202	WO2004US08053	20040317

Priority Numbers: US20030390951 [20030318]; WO2004US08053 [20040317]; EP20040757521 [20040317]; EP20100164361 [20040317]; US20080170341 [20080709]; US20160138115 [20160425]; US20170670778 [20170807]; US20120648119 [20121009]; US20170641991 [20170705]; US20170832633 [20171205]; US20190422749 [20190524]; US20120653201 [20121016]; US20160061895 [20160304]; US20220586665 [20220127]

Probable Patent Assignee: EDWARDS LIFESCIENCES CORP

Assignees: EDWARDS LIFESCIENCES CORP; EDWARDS LIFESCIENCE CORP; IOBBI MARIO M

Non Std Assignees: EDWARDS LIFESCIENCES CORP IRVINE; LOBBI MARIO M

Inventors: IOBBI MARIO; IOBBI MARIO M; IOBBI MARIO M GABRIEL; LOBBI MARIO M

Non Std Inventors: IOBBI MARIO M IRVINE; MARIO M LOBBI

Agent(s): RACKETTE PATENTANWALTE PARTG MBB; EKE PHILIPPA DIANNE; SAUNDERS AND DOLLEYMORE LLP; KNIGHTS RUPERT; SAUNDERS AND DOLLEYMORE LLP; EISENFUEHR SPEISER; DE ELZABURU ALBERTO; ELZABURU SLP; HO PUI TONG; KLARQUIST SPARKMAN LLP; KLARQUIST SPARKMAN LLP; GERMAN JOEL B; EDWARDS LIFESCIENCES CORP; DAVID L; HAUSER DAVID L; ANNEMARIE; GUY

Designated States: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LI; LU; MC; NL; PL; PT; RO; SE; SI; SK; TR; AE; AG; AL; AM; AU; AZ; BA; BB; BF; BJ; BR; BW; BY; BZ; CA; CF; CG; CI; CM; CN; CO; CR; CU; DM; DZ; EC; EG; GA; GD; GE; GH; GM; GN; GQ; GW; HR; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LV; MA; MD; MG; MK; ML; MN; MR; MW; MX; MZ; NA; NE; NI; NO; NZ; OM; PG; PH; RU; SC; SD; SG; SL; SN; SY; SZ; TD; TG; TJ; TM; TN; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM; ZW

[View in PatBase](#)

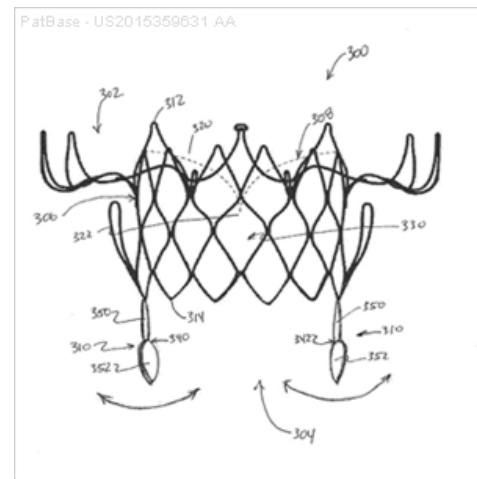
[EN] PROSTHETIC VALVE WITH VORTICE-INDUCING BAFFLE

[EN] A prosthetic valve comprising a stent frame, a valve structure, and a baffle structure. The stent frame defines a lumen. The valve structure is disposed within the lumen, and defines an inflow side and an outflow side. An outflow track is established within the lumen downstream of the outflow side and along which fluid flow from the valve structure progresses. The baffle structure is connected to the stent frame downstream of the outflow side and is configured to induce vortical flow, for example including a vortex ring. In some embodiments, the prosthetic valve is a transcatheter prosthetic mitral valve having three leaflets.

International Class: A61F2/24; A61F2/06

Cooperative Patent Class: A61F2/2412; A61F2/2418; A61F2002/068

US Class: 623/2.17; 623/2.19; 1/1



Family Information

Patent Number	Publication Date	Application Number	Application Date
CN108430395 A	20180821	CN201780005360	20170106
EP3399947 A1	20181114	EP20170701220	20170106
JP2019500965 T2	20190117	JP20180535022T	20170106
JP6896742 B2	20210630	JP20180535022T	20170106
US10111749 BB	20181030	US20160989839	20160107
US2015359631 AA	20151217	US20140301632	20140611
US2016113764 AA	20160428	US20160989839	20160107
US9662203 BB	20170530	US20140301632	20140611
WO17120404 A1	20170713	WO2017US12429	20170106

Priority Numbers: US20160989839 [20160107]; WO2017US12429 [20170106]; US20140301632 [20140611]

Probable Patent Assignee: MEDTRONIC INC

Assignees: MEDTRONIC VASCULAR INC; MEDTRONIC INC

Inventors: DUFFY NIAL: SHEAHAN EDMOND

Agent(s): ZIMMERMANN AND PARTNER PATENTANWALTE MBB; DESHIMARU TAKESHI; MATSUSHITA MITSURU; DICKE BILLIG AND CZAJA PLLC; DICKE BILLIG AND CZAJA PLLC; EDMAN SEAN J

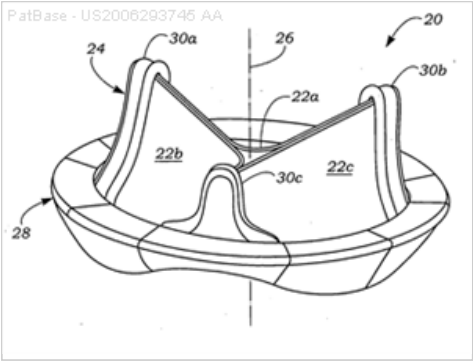
Designated States: AL; AT; BA; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HR; HU; IE; IS; IT; LI; LT; LU; LV; MC; ME; MK; MT; NL; NO; PL; PT; RO; RS; SE; SI; SK; SM; TR; AE; AG; AM; AO; AU; AZ; BB; BF; BH; BJ; BN; BR; BW; BY; BZ; CA; CF; CG; CI; CL; CM; CN; CO; CR; CU; DJ; DM; DO; DZ; EC; EG; GA; GD; GE; GH; GM; GN; GQ; GT; GW; HN; ID; IL; IN; IR; JP; KE; KG; KH; KM; KN; KP; KR; KW; KZ; LA; LC; LK; LR; LS; LY; MA; MD; MG; ML; MN; MR; MW; MX; MY; MZ; NA; NE; NG; NI; NZ; OM; PA; PE; PG; PH; QA; RU; RW; SA; SC; SD; SG; SL; SN; ST; SV; SY; SZ; TD; TG; TH; TJ; TM; TN; TT; TZ; UA; UG; US; UZ; VC; VN; ZA; ZM; ZW

10. Family 32132676 (US2006293745 AA)

[View in PatBase](#)

Title
[EN] ANATOMICALLY APPROXIMATE PROSTHETIC MITRAL HEART VALVE

Abstract
[EN] An anatomically approximate prosthetic heart valve includes dissimilar flexible leaflets, dissimilar commissures and/or a non-circular flow orifice. The heart valve may be implanted in the mitral position and have one larger leaflet oriented along the anterior aspect so as to mimic the natural anterior leaflet. Two other smaller leaflets extend around the posterior aspect of the valve. A basic structure providing peripheral support for the leaflets includes two taller commissures on both sides of the larger leaflet, with a third, smaller commissure between the other two leaflets. The larger leaflet may be thicker and/or stronger than the other two leaflets. The base structure defines a flow orifice intended to simulate the shape of the mitral annulus during the systolic phase. For example, the flow orifice may be elliptical. A relatively wide sewing ring has a contoured inflow end and is attached to the base structure in such a way that the valve can be implanted in an intra-atrial position and the taller commissures do not extend too far into the left ventricle, therefore avoiding injury to the ventricle.



International Class: A61F2/24; A61F2/00
Cooperative Patent Class: A61F2/2403; A61F2/2409; A61F2/2412; A61F2/2418; A61F2/2448; A61F2230/0008; A61F2230/0069; A61F2230/0076; A61F2230/0095

US Class: 1/1; 623/2.12; 623/2.13; 623/2.14; 623/2.15; 623/2.17; 623/2.170P; 623/2.170S; 623/2.18; 623/2.19; 623/2.190P; 623/2.37; 623/2.38; 623/2.41; 623/2.410S

Family Information

Patent Number	Publication Date	Application Number	Application Date
DE602005049620 D1	20160804	DE200560049620T	20050121
DE602005053308 D1	20180208	DE200560053308T	20050121
EP1734902 A1	20061227	EP20050705961	20050121
EP1734902 B1	20160629	EP20050705961	20050121
EP3009105 A1	20160420	EP20150194650	20050121
EP3009105 B1	20171227	EP20150194650	20050121
US10085836 BB	20181002	US20170674203	20170810
US10342661 BB	20190709	US20180148883	20181001
US2006293745 AA	20061228	US20050039522	20050119
US2011015731 AA	20110120	US20100889223	20100923
US2012123530 AA	20120517	US20110229346	20110909
US2014222141 AA	20140807	US20140256763	20140418
US2016158013 AA	20160609	US20150881061	20151012
US2017333188 AA	20171123	US20170674203	20170810
US2019029828 AA	20190131	US20180148883	20181001
US7871435 BB	20110118	US20050039522	20050119
US8034104 BB	20111011	US20100889223	20100923
US8721716 BB	20140513	US20110229346	20110909
US9155617 BB	20151013	US20140256763	20140418
US9730794 BB	20170815	US20150881061	20151012
WO05072654 A1	20050811	WO2005US01841	20050121

Priority Numbers: US20040538516P [20040123]; US20050039522 [20050119]; EP20050705961 [20050121]; WO2005US01841 [20050121]; EP20150194650 [20050121]; US20150881061 [20151012]; US20140256763 [20140418]; US20110229346 [20110909]; US20100889223 [20100923]; US20170674203 [20170810]; US20180148883 [20181001]

Probable Patent Assignee: EDWARDS LIFESCIENCES CORP

Assignees: EDWARDS LIFESCIENCES CORP; LAM HUNG L; CARPENTIER ALAIN F; FRANCE HUGUES LA; LAFRANCE HUGUES

Non Std Assignees: EDWARDS LIFESCIENCES IRVINE CORP

Inventors: LAFRANCE HUGUES; CARPENTIER ALAIN F; CARPENTIER ALAIN; LAM HUNG L; LAM HUNG; FRANCE HUGUES LA; LA FRANCE HUGUES

Non Std Inventors: LAM HUNG L NORCO; LAM HUNG NORCO; LAFRANCE HUGUES MISSION VIEJO

Agent(s): RACKETTE PATENTANWALTE PARTG MBB; DOLLEYMORES; HO PUI TONG; EDWARDS LIFESCIENCES CORP; ANNEMARIE; GUY; GUY L; PUI TONG

Designated States: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LI; LT; LU; MC; NL; PL; PT; RO; SE; SI; SK; TR; AE; AG; AL; AM; AU; AZ; BA; BB; BF; BJ; BR; BW; BY; BZ; CA; CF; CG; CI; CM; CN; CO; CR; CU; DM; DZ; EC; EG; GA; GD; GE; GH; GM; GN; GQ; GW; HR; ID; IL; IN; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LV; MA; MD; MG; MK; ML; MN; MR; MW; MX; MZ; NA; NE; NI; NO; NZ; OM; PG; PH; RU; SC; SD; SG; SL; SN; SY; SZ; TD; TG; TJ; TM; TN; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM; ZW

11. Family 62738109 (US2017281341 AA)

[View in PatBase](#)

Title
[EN] MINIMALLY INVASIVE MITRAL VALVE REPLACEMENT WITH BRIM

Abstract
[EN] A collapsible-expandable tubular stent (29) constructed of shape-memory material which is implantable into a human heart, which comprises proximal and distal rings (71,73) and at least two spaced apart posts (69) that extend axially between said rings (71, 73), said distal ring (73) comprising a plurality of distal arms (77) which are connected to the distal ring (73) at only one end and which have a free opposite end; said proximal ring (71) comprising a plurality of, which are connected at only one end to the proximal ring (71) and which have a free opposite end, which proximal arms (75) are constructed to swing radially outward at their free ends.

International Class: A61F2/24; A61F2/844
Cooperative Patent Class: A61F2/2418; A61F2/2439; A61F2210/0014; A61F2220/0008; A61F2250/0006; A61F2250/006

US Class: 1/1; 623/2.18

Family Information

Patent Number	Publication Date	Application Number	Application Date
CA2971281 AA	20170616	CA20152971281	20151218
CN107427364 A	20171201	CN201580069238	20151218
CN107427364 B	20191210	CN201580069238	20151218
DE602014022277 D1	20180405	DE201460022277T	20141223
EP3037064 A1	20160629	EP20140199956	20141223
EP3037064 B1	20180314	EP20140199956	20141223
JP2017538540 T2	20171228	JP20170533301T	20151218
JP2021072936 A2	20210513	JP20210012667	20151218
JP7072932 B2	20220523	JP20210012667	20151218
US10463483 BB	20191105	US20170623790	20170615
US2017281341 AA	20171005	US20170623790	20170615
WO16097337 A1	20160623	WO2015EP80582	20151218

Priority Numbers: EP20140199488 [20141219]; EP20140199956 [20141223]; WO2015EP80582 [20151218]; JP20170533301T [20151218]; JP20210012667 [20210129]; EP20140019956 [20141223]; US20170623790 [20170615]

Probable Patent Assignee: VENUS MEDTECH HANGZHOU INC

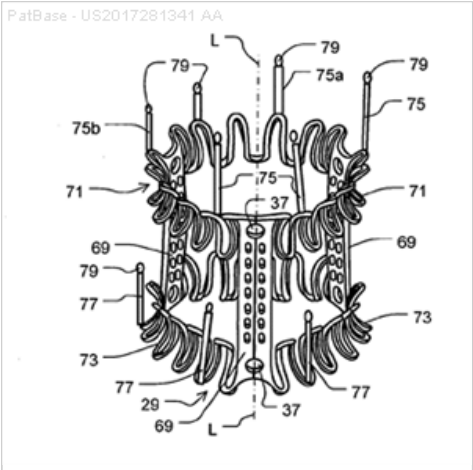
Assignees: VENUS MEDTECH HANGZHOU INC; TRANSCATHETER TECH GMBH

Non Std Assignees: LIM HOU SEN; GOTZ WOLFGANG; VENUS MEDTECH HANGZHOU INC HANGZHOU; TRANSCATHETER TECHNOLOGIES GMBH

Inventors: GOTZ WOLFGANG; LIM HOU SEN; G TZ WOLFGANG; GOETZ WOLFGANG; WOLFGANG GOETZ

Agent(s): MILLMAN IP INC; BOBBERT AND PARTNER PATENTANWAELTE PARTMBB; SUN RAYMOND

Designated States: AL; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HR; HU; IE; IS; IT; LI; LT; LU; LV; MC; MK; MT; NL; NO; PL; PT; RO; RS; SE; SI; SK; SM; TR; BA; ME; AE; AG; AM; AO; AU; AZ; BB; BF; BH; BJ; BN; BR; BW; BY; BZ; CA; CF; CG; CI; CL; CM; CN; CO; CR; CU; DM; DO; DZ; EC; EG; GA; GD; GE; GH; GM; GN; GQ; GT; GW; HN; ID; IL; IN; IR; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LY; MA; MD; MG; ML; MN; MR; MW; MX; MY; MZ; NA; NE; NG; NI; NZ; OM; PA; PE; PG; PH; QA; RU; RW; SA; SC; SD; SG; SL; SN; ST; SV; SY; SZ; TD; TG; TH; TJ; TM; TN; TT; TZ; UA; UG; US; UZ; VC; VN; ZA; ZM; ZW

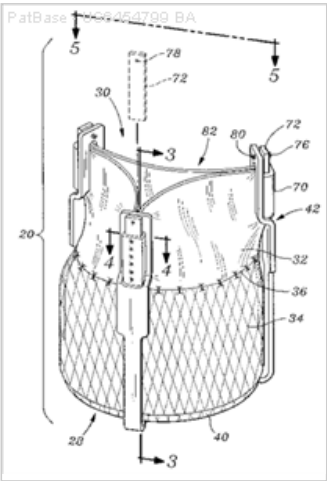


12. Family 28673059 (US6454799 BA)

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Title
[EN] MINIMALLY-INVASIVE HEART VALVES AND METHODS OF USE

Abstract
[EN] Expandable heart valves for minimally invasive valve replacement surgeries are disclosed. In a first embodiment, an expandable pre-assembled heart valve includes a plastically-expandable annular base having plurality of upstanding commissure posts. A tubular flexible member including a prosthetic section and a fabric section is provided, with the prosthetic section being connected to the commissure posts and defining leaflets therebetween, and the fabric section being attached to the annular base. In a second embodiment, an expandable heart valve includes an annular tissue-engaging base and a subassembly having an elastic wireform and a plurality of leaflets connected thereto. The annular base and subassembly are separately stored and connected just prior to delivery to the host annulus. Preferably, the leaflet subassembly is stored in its relaxed configuration to avoid deformation of the leaflets. The expandable heart valves may be implanted using a balloon catheter. Preferably, the leaflets of the heart valves are secured to the commissure regions of the expandable stents using a clamping arrangement to reduce stress.



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Cooperative Patent Class: A61F2/2412; A61F2/2418; A61F2/2427; A61F2/2433; A61F2/2436; A61F2/2469; A61F2220/0016; A61F2220/0025; A61F2220/0075; Y10S623/90
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Family Information

Patent Number	Publication Date	Application Number	Application Date
AT306876 E	20051115	AT20010930449T	20010405
AU2001256985 AA	20011023	AU20010256985	20010405
AU2001256985 BB	20060831	AU20010256985	20010405
AU200156985 A1	20011023	AU20010056985	20010405
AU200156985 A5	20011023	AU20010056985	20010405
CA2407062 AA	20020913	CA20012407062	20010405
CA2407062 C	20090818	CA20012407062	20010405
DE60114165 D1	20051124	DE20016014165T	20010405
DE60114165 T2	20060713	DE20016014165T	20010405
EP1267753 A2	20030102	EP20010930449	20010405
EP1267753 B1	20051019	EP20010930449	20010405
ES2250398 T3	20060416	ES20010930449T	20010405
US10022220 BB	20180717	US20140244712	20140403
US2002198594 AA	20021226	US20020185812	20020628
US2004186565 AA	20040923	US20040766139	20040128
US2008188929 AA	20080807	US20080099566	20080408
US2010211165 AA	20100819	US20100767278	20100426
US2013131790 AA	20130523	US20130734719	20130104
US2014222140 AA	20140807	US20140244712	20140403
US6454799 BA	20020924	US20000549413	20000406
US6767362 BB	20040727	US20020185812	20020628
US7381218 BB	20080603	US20040766139	20040128
US8092518 BB	20120110	US20080099566	20080408
US8349000 BB	20130108	US20100767278	20100426
US8709077 BB	20140429	US20130734719	20130104
WO0176510 A2	20011018	WO2001US11201	20010405
WO0176510 A3	20020404	WO2001US11201	20010405
WO0176510 C1	20020103	WO2001US11201	20010405

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Probable Patent Assignee: EDWARDS LIFESCIENCES CORP

Assignees: EDWARDS LIFESCIENCES CORP; SCHRECK STEFAN; EDWARDS LIFESCIENCES

Non Std Assignees: EDWARDS LIFESCIENCES CORP IRVINE

Inventors: SCHRECK STEFAN

Non Std Inventors: STEFAN SCHRECK

Agent(s): MAXWELLS PATENT AND TRADE MARK ATTORNEYS PTY LTD; PETER MAXWELL AND ASSOCIATES; BCF LLP; DEBRA D CONDINO EDWARDS LIFESCIENCES LLC; DEBRA D CONDINO; GUY L CUMBERBATCH; JOHN CHRISTOPHER JAMES; CUMBERBATCH GUY; DAVID; GUY; HAUSER DAVID; DAVID L; PUI TONG

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13. Family 50916057 (US2012089223 AA)

[View in PatBase](#)

Title
[EN] BAR-LESS COMMISSURE ATTACHMENT FOR PROSTHETIC VALVE

Abstract
[EN] An implantable prosthetic valve, according to one embodiment, comprises a radially collapsible and expandable frame and a leaflet structure supported within the frame. The leaflet structure can comprise a plurality of leaflets paired together at commissures. In one embodiment, the commissures can comprise leaflet tabs rolled into spirals around non-rigid reinforcing inserts. In another embodiment, the commissures can comprise a reinforcing sheet folded around leaflet tabs.

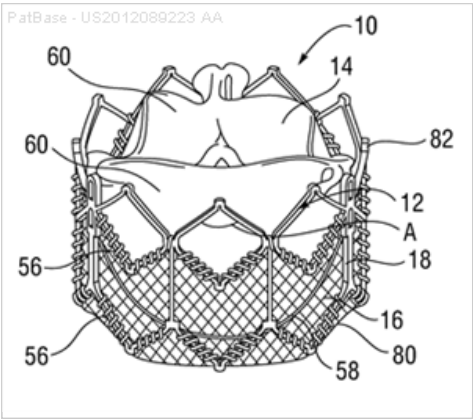
International Class: A61F2/24; A61M29/02; A61F2/958; A61F2/02; A61F2/06; A61F; A61M; A61F2/00; A61M29/00

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US Class: 1/1; 623/2.11; 623/2.110P; 623/2.12; 623/2.14; 623/2.140P; 623/2.17; 623/2.170S

Family Information

Patent Number	Publication Date	Application Number	Application Date
AU2011312034 AA	20130502	AU20110312034	20111005
AU2011312034 BB	20151008	AU20110312034	20111005
AU2015268755 AA	20160121	AU20150268755	20151216
AU2015268755 BB	20170615	AU20150268755	20151216
AU2017228618 AA	20171005	AU20170228618	20170914
AU2019222929 AA	20190919	AU20190222929	20190830
AU2019222929 BB	20200227	AU20190222929	20190830
AU2019272005 AA	20191219	AU20190272005	20191128
AU2019272005 BB	20200123	AU20190272005	20191128
AU2019272011 AA	20191219	AU20190272011	20191128
AU2019272011 BB	20200618	AU20190272011	20191128
AU2019272012 AA	20191219	AU20190272012	20191128
AU2019272012 BB	20200319	AU20190272012	20191128
AU2019272013 AA	20191219	AU20190272013	20191128
AU2019272013 BB	20200123	AU20190272013	20191128
AU2020200377 AA	20200213	AU20200200377	20200120
AU2020200377 BB	20200312	AU20200200377	20200120
AU2020233732 AA	20201008	AU20200233732	20200917
AU2020233732 BB	20220519	AU20200233732	20200917
AU2022204582 AA	20220721	AU20220204582	20220628
AU2022204586 AA	20220721	AU20220204586	20220628
CA2813419 AA	20130402	CA20112813419	20111005
CA2813419 C	20191217	CA20112813419	20111005
CA3020195 AA	20120412	CA20113020195	20111005
CA3020195 C	20201027	CA20113020195	20111005
CA3063553 AA	20120412	CA20113063553	20111005
CA3063553 C	20220712	CA20113063553	20111005
CA3063561 AA	20120412	CA20113063561	20111005
CA3063607 AA	20120412	CA20113063607	20111005
CA3063608 AA	20120412	CA20113063608	20111005
CA3063658 AA	20120412	CA20113063658	20111005
CA3063658 C	20210105	CA20113063658	20111005
CN103237524 A	20130807	CN201180058439	20111005



Patent Number	Publication Date	Application Number	Application Date
CN103237524 B	20160120	CN201180058439	20111005
CN105380730 A	20160309	CN201510850059	20111005
CN105380730 B	20180817	CN201510850059	20111005
CN108888387 A	20181127	CN201810800907	20111005
CN111249037 A	20200609	CN202010138482	20111005
CN111249037 B	20210827	CN202010138482	20111005
CN111265336 A	20200612	CN202010137954	20111005
CN111265336 B	20220412	CN202010137954	20111005
CN111265337 A	20200612	CN202010138795	20111005
CN111265337 B	20210921	CN202010138795	20111005
CN111265338 A	20200612	CN202010138906	20111005
CN111265338 B	20210413	CN202010138906	20111005
CN111265339 A	20200612	CN202010138934	20111005
CN111265339 B	20220301	CN202010138934	20111005
CN111281605 A	20200616	CN202010138840	20111005
CN111281605 B	20210413	CN202010138840	20111005
CN114209472 A	20220322	CN202210076714	20111005
CN115192259 A	20221018	CN202210773538	20111005
CN115192260 A	20221018	CN202210773554	20111005
DE20201111125 U1	20200702	DE201120111125U	20111005
DE20201111126 U1	20200702	DE201120111126U	20111005
DE20201111127 U1	20200702	DE201120111127U	20111005
DE20201111128 U1	20200702	DE201120111128U	20111005
DE20201111130 U1	20200702	DE201120111130U	20111005
DE602011064877 D1	20200227	DE201160064877T	20111005
DE602011067425 D1	20200702	DE201160067425T	20111005
DE602011067426 D1	20200709	DE201160067426T	20111005
DE602011068667 D1	20201001	DE201160068667T	20111005
DE602011069487 D1	20201210	DE201160069487T	20111005
DE602011070450 D1	20210401	DE201160070450T	20111005
DE602011070667 D1	20210422	DE201160070667T	20111005
DE602011070668 D1	20210422	DE201160070668T	20111005
DE602011070775 D1	20210512	DE201160070775T	20111005
DE602011070919 D1	20210520	DE201160070919T	20111005
DE602011071811 D1	20210930	DE201160071811T	20111005
DK2624785 T3	20210510	DK20110831542T	20111005
DK3485848 T3	20201116	DK20180210741T	20111005
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DK3498225 T3	20200831	DK20190154544T	20111005
DK3498226 T3	20200316	DK20190154572T	20111005
DK3590472 T3	20210503	DK20190189837T	20111005
DK3593762 T3	20210125	DK20190189293T	20111005
DK3616651 T3	20210419	DK20190203737T	20111005
DK3626208 T3	20210419	DK20190203742T	20111005
DK3669828 T3	20210510	DK20190206328T	20111005
DK3669829 T3	20211004	DK20190209230T	20111005
EP2624785 A2	20130814	EP20110831542	20111005
EP2624785 A4	20151202	EP20110831542	20111005

Patent Number	Publication Date	Application Number	Application Date
EP2624785 B1	20210421	EP20110831542	20111005
EP3485848 A1	20190522	EP20180210741	20111005
EP3485848 B1	20200916	EP20180210741	20111005
EP3494928 A1	20190612	EP20180210706	20111005
EP3494928 B1	20200617	EP20180210706	20111005
EP3498225 A1	20190619	EP20190154544	20111005
EP3498225 B1	20200617	EP20190154544	20111005
EP3498226 A1	20190619	EP20190154572	20111005
EP3498226 B1	20200205	EP20190154572	20111005
EP3590472 A1	20200108	EP20190189837	20111005
EP3590472 B1	20210317	EP20190189837	20111005
EP3593762 A1	20200115	EP20190189293	20111005
EP3593762 B1	20201125	EP20190189293	20111005
EP3616651 A1	20200304	EP20190203737	20111005
EP3616651 B1	20210407	EP20190203737	20111005
EP3626208 A1	20200325	EP20190203742	20111005
EP3626208 B1	20210407	EP20190203742	20111005
EP3669828 A1	20200624	EP20190206328	20111005
EP3669828 B1	20210505	EP20190206328	20111005
EP3669829 A1	20200624	EP20190209230	20111005
EP3669829 B1	20210915	EP20190209230	20111005
EP3960126 A1	20220302	EP20210196048	20111005
EP4039229 A1	20220810	EP20220159674	20111005
EP4042974 A1	20220817	EP20220161314	20111005
ES2781788 T3	20200907	ES20190154572T	20111005
ES2805467 T3	20210212	ES20180210706T	20111005
ES2813091 T3	20210322	ES20190154544T	20111005
ES2834106 T3	20210616	ES20180210741T	20111005
ES2855679 T3	20210924	ES20190189293T	20111005
ES2867970 T3	20211021	ES20190189837T	20111005
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ES2879553 T3	20211122	ES20110831542T	20111005
ES2880607 T3	20211125	ES20190203737T	20111005
ES2883098 T3	20211207	ES20190206328T	20111005
ES2891075 T3	20220126	ES20190209230T	20111005
HK1188113 A1	20140425	HK20140101438	20140214
HK1188113 B	20210924	HK20140101438	20140214
HK40008856 A1	20200619	HK20190132112	20140214
HK40008856 B	20210226	HK20190132112	20140214
HK40009983 A1	20200703	HK20190133351	20140214
HK40009983 B	20210205	HK20190133351	20140214
HK40009987 A1	20200703	HK20190133355	20140214
HK40009987 B	20210205	HK20190133355	20140214
HK40010099 A1	20200703	HK20190133530	20140214
HK40010099 B	20210205	HK20190133530	20140214
HK40020792 A1	20201030	HK20204010289	20140214
HK40020792 B	20210416	HK20204010289	20140214
HK40020800 A1	20201030	HK20204010476	20140214

Patent Number	Publication Date	Application Number	Application Date
HK40020800 B	20210618	HK20204010476	20140214
HK40030780 A1	20210305	HK20204020932	20201126
HK40030780 B	20220401	HK20204020932	20201126
HK40033139 A1	20210409	HK20204022369	20140214
HK40033139 B	20210730	HK20204022369	20140214
HR20200442 T1	20200612	HR20200000442	20200318
HR20200997 T1	20201016	HR20200000997	20200624
HR20201322 T1	20201127	HR20200001322	20200825
HR20201796 T1	20210108	HR20200001796	20201110
HR20210155 T1	20210319	HR20210000155	20210129
HR20210684 T1	20210611	HR20210000684	20210503
HR20210771 T1	20210723	HR20210000771	20210513
HR20211464 T1	20211224	HR20210001464	20111005
HU050018 T2	20201130	HU20180210706T	20111005
HU050568 T2	20201228	HU20190154544T	20111005
HU051454 T2	20210301	HU20180210741T	20111005
HU053080 T2	20210628	HU20190189293T	20111005
HU053080 T4	20211129	HU20190189293T	20111005
HU053890 T2	20210728	HU20110831542T	20111005
HU055753 T2	20211228	HU20190206328T	20111005
HU056970 T2	20220428	HU20190209230T	20111005
JP2013543406 A2	20131205	JP20130532923	20111005
JP2013543406 T2	20131205	JP20130532923T	20111005
JP2016209665 A2	20161215	JP20160173406	20160906
JP6196358 B2	20170913	JP20160173406	20160906
LT2624785 T	20210510	LT20110831542T	20111005
LT3485848 T	20201125	LT20180210741T	20111005
LT3494928 T	20200727	LT20180210706T	20111005
LT3498225 T	20200910	LT20190154544T	20111005
LT3498226 T	20200410	LT20190154572T	20111005
LT3593762 T	20210210	LT20190189293T	20111005
LT3669828 T	20210525	LT20190206328T	20111005
LT3669829 T	20211025	LT20190209230T	20111005
PL2624785 T3	20211011	PL20110831542T	20111005
PL3494928 T3	20200907	PL20180210706T	20111005
PL3494928 T4	20201228	PL20180210706T	20111005
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PL3590472 T3	20210712	PL20190189837T	20111005
PL3593762 T3	20210504	PL20190189293T	20111005
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PL3626208 T3	20210913	PL20190203742T	20111005
PL3669828 T3	20210830	PL20190206328T	20111005
PL3669829 T3	20211220	PL20190209230T	20111005
PT2624785 T	20210628	PT20110831542T	20111005
PT3485848 T	20201112	PT20180210741T	20111005
PT3494928 T	20200702	PT20180210706T	20111005
PT3498225 T	20200904	PT20190154544T	20111005

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PT3498226 T	20200330	PT20190154572T	20111005
PT3590472 T	20210414	PT20190189837T	20111005
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RS60104 B1	20200529	RS20200000293	20111005
RS60677 B1	20200930	RS20200000755	20111005
RS60735 B1	20200930	RS20200001014	20111005
RS61073 B1	20201231	RS20200001343	20111005
RS61523 B1	20210331	RS20210000196	20111005
RS61831 B1	20210630	RS20210000524	20111005
RS61904 B1	20210630	RS20210000572	20111005
RS62462 B1	20211130	RS20210001192	20111005
SI2624785 T1	20210831	SI20110031970T	20111005
SI3485848 T1	20201231	SI20110031931T	20111005
SI3494928 T1	20200831	SI20110031891T	20111005
SI3498225 T1	20201030	SI20110031910T	20111005
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SI3669828 T1	20210831	SI20110031974T	20111005
SI3669829 T1	20211130	SI20110032003T	20111005
TR202004969 T4	20200421	TR20200004969T	20111005
TR202011412 T4	20200821	TR20200011412T	20111005
TR202013321 T4	20200921	TR20200013321T	20111005
TR202017945 T4	20201123	TR20200017945T	20111005
TR2021005094 T4	20210421	TR20210005094T	20111005
TR2021006474 T4	20210521	TR20210006474T	20111005
TR2021006539 T4	20210521	TR20210006539T	20111005
TR2021007438 T4	20210521	TR20210007438T	20111005
TR2021007927 T4	20210621	TR20210007927T	20111005
TR202101346 T4	20210222	TR20210001346T	20111005
TR2021015068 T4	20211021	TR20210015068T	20111005
US10433958 BB	20191008	US20180201800	20181127
US10433959 BB	20191008	US20180202701	20181128
US10478292 BB	20191119	US20180202469	20181128
US10537423 BB	20200121	US20160194375	20160627
US10729543 BB	20200804	US20190705930	20191206
US10828155 BB	20201110	US20190694983	20191125
US10842622 BB	20201124	US20190697983	20191127
US10849741 BB	20201201	US20190601414	20191014
US10849742 BB	20201201	US20190694203	20191125
US10849743 BB	20201201	US20190697065	20191126
US10856976 BB	20201208	US20190695785	20191126
US11123184 BB	20210921	US20190657915	20191018
US2012089223 AA	20120412	US20110253698	20111005
US2012123529 AA	20120517	US20110253689	20111005

Patent Number	Publication Date	Application Number	Application Date
US2016374802 AA	20161229	US20160194375	20160627
US2019159894 AA	20190530	US20180202469	20181128
US2019192288 AA	20190627	US20180201800	20181127
US2019192289 AA	20190627	US20180202701	20181128
US2020030090 AA	20200130	US20190516089	20190718
US2020069420 AA	20200305	US20190601414	20191014
US2020093591 AA	20200326	US20190694203	20191125
US2020093592 AA	20200326	US20190694983	20191125
US2020093594 AA	20200326	US20190695785	20191126
US2020093595 AA	20200326	US20190697983	20191127
US2020100895 AA	20200402	US20190697065	20191126
US2020107929 AA	20200409	US20190705930	20191206
US2020146815 AA	20200514	US20190657915	20191018
US2021093450 AA	20210401	US20200105267	20201125
US2022218471 AA	20220714	US20220707127	20220329
US2022226111 AA	20220721	US20220710836	20220331
US8568475 BB	20131029	US20110253698	20111005
US9393110 BB	20160719	US20110253689	20111005
WO12048035 A2	20120412	WO2011US54973	20111005
WO12048035 A3	20120719	WO2011US54973	20111005

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Probable Patent Assignee: EDWARDS LIFESCIENCES CORP

Assignees: EDWARDS LIFESCIENCES CORP; BENICHOU NETANEL; NGUYEN SON V; DADONKIN LARISA; YOHANAN ZIV; LEVI TAMIR; GUROVICH NIK; FELSEN BELLA; MAIMON DAVID; EDDERHOLTZ LIFE SCIENCE CO; GUROVICH NIKOLAY; DADONKINA LARISA; LEVI TAMIR S; SHERMAN ELENA; SHARONI RON

Non Std Assignees: NGUYEN SO V; EDWARDS LIFESCIENCES IRVINE CORP; ONE EDWARDS WAY IRVINE; ONE EDWARDS WAY; EDWARDS LIFESCIENCES CORPORATION

Inventors: BENICHOU NETANEL; DADONKIN LARISA; GUROVICH NIK; MAIMON DAVID; LEVI TAMIR; YOHANAN ZIV; FELSEN BELLA; NGUYEN SON V; NGUYEN SO V; LEVI TAMIR S; GUROVICH NIKOLAY; DADONKINA LARISA; NGUYEN SON; TAMIR LEVI; SON V NGUYEN; NETANEL BENICHOU; DAVID MAIMON; ZIV YOHANAN; NIK GUROVICH; BELLA FELSEN; LARISA DADONKIN; SHARONI RON; SHERMAN ELENA

Non Std Inventors: LEVI TAMIR IRVINE; NGUYEN SON V IRVINE; BENICHOU NETANEL IRVINE; MAIMON DAVID IRVINE; YOHANAN ZIV IRVINE; GUROVICH NIK IRVINE; FELSEN BELLA IRVINE; DADONKIN LARISA IRVINE; LEVI TAMIR T; NGUYEN SON V S V; BENICHOU NETANEL N; MAIMON DAVID D; YOHANAN ZIV Z; GUROVICH NIK N; FELSEN BELLA B; DADONKIN LARISA L; V SON NGUYEN

Agent(s): PETER MAXWELL AND ASSOCIATES; SPRUSON AND FERGUSON; STIKEMAN ELLIOTT SENCRL SRL LLP; WUESTHOFF AND WUESTHOFF PATENTANWAELE PARTG MBB; EISENFUEHR SPEISER PATENTANWAELE RECHTSANWAELE PARTGMBB; EISENFUEHR SPEISER AND PARTNER; EISENFUEHR SPEISER; CURELL SUNOL SLP; KING AND WOOD MALLESONS; KING AND WOOD MALLESONS IP LTD; ORIENTAL INTELLECTUAL PROPERTY SERVICES CO; CEMEN KARABAG; GERMAN JOEL B; KLARQUIST SPARKMAN LLC; KLARQUIST SPARKMAN LLC; KLARQUIST SPARKMAN LLP; KLARQUIST SPARKMAN LLP; DAVID L; ANNEMARIE; HAUSER DAVID L ET AL; EDWARDS LIFESCIENCES LLC

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