

13 Documents

Publication numbers	Title	Current assignees
US20040254521 A1	Shunt for the treatment of glaucoma	SOLX
US5882327 A	Long-term glaucoma drainage implant	LOUISIANA STATE UNIVERSITY
WO9721406 A1	Apparatus for lowering the intraocular pressure of an eye	WOUND HEALING OF OKLAHOMA
US5601094 A	Ophthalmic shunt	REISS; GEORGE R.
IL--89106 A	"spare parts" for ophthalmic surgical procedures.	LANGERMAN DAVID W
US2002156 A	Exhaust steam injector	COMBUSTION ENGINEERING SUPERHEATER
US2013150 A	Packing crate	HENZE JOSEPH J
NL--40440D C	Electric lamp and the like and its mounting and electrical connection	PATRA PATENT TREUHAND
US2005288 A	Permanent hair waving device	HAMILTON COOPER WILLIAM
WO201385643 A1	Devices and methods for placing a shunt into the intra-scleral space	AQUESYS
US20050288617 A1	Flow regulating implants	OPTONOL
US20040015140 A1	Uveoscleral drainage device	YALE UNIVERSITY
WO200064511 A1	A glaucoma shunt and a method of making and surgically implanting the same	UNIVERSITY OF ARIZONA, ...

Shunt for the treatment of glaucoma US20040254521 A1

<u>Current assignees</u> OCCULOGIX SOLX* <u>Inventors</u> SIMON GABRIEL <u>Priority data including date</u> 2003US-60478895 2003-06-16 2004US-10869166 2004-06-16 2004WO-US19836 2004-06-16	<u>IPC - International classification</u> A61F-002/14 A61F-009/00 A61F-009/007* A61F-009/008 A61M-001/00 A61M-005/00 <u>CPC - Cooperative classification</u> A61F-009/007/81* <u>PCL - US patent classification</u> PCLO: 604008000*
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<u>Family</u>			
US2004254521	A1	2004-12-16	US7207965 B2 2007-04-24
WO2004110391	A2	2004-12-23	JP2007526013 A 2007-09-13
CA2529495	A1	2004-12-23	EP1638508 A4 2008-12-03
AU2004247272	A1	2004-12-23	CA2529495 C 2013-02-05
EP1638508	A2	2006-03-29	EP1638508 B1 2014-08-13
WO2004110391	A3	2006-12-28	ES2523454 T3 2014-11-26

(EP1638508)

A system is provided for reducing intraocular hypertension, the system comprising an implantable shunt, comprising a planar member having at least one microchannel disposed within the planar member. There is an inflow port disposed proximate to a first end of the microchannel and an outflow port disposed proximate to a second end of the microchannel, wherein the inflow port is configured such that when the implantable shunt is implanted, the inflow port is located about approximately within the region of an angle of an anterior chamber.

Long-term glaucoma drainage implant US5882327 A

Current assignees

LOUISIANA STATE UNIVERSITY*

Inventors

JACOB JEAN T

Priority data including date

1997US-08839263 1997-04-17

IPC - International classification

A61F-009/007*

CPC - Cooperative classification

A61F-009/007/81*

PCL - US patent classification

PCLO: 604008000***PCLX:** 604294000

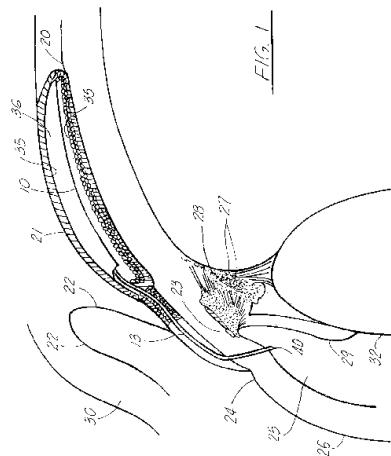
Family

[US5882327](#)

A 1999-03-16

(US5882327)

An implantable ocular device to decrease intraocular pressure by draining aqueous humor from the anterior chamber of the eye into an extraocular space above the sclera and below the conjunctiva and Tenon's layers. The device includes a conduit attached to an episcleral drainage plate having a porous posterior surface for cellular ingrowth and attachment by the sclera. The distal end of the conduit is inserted into the anterior chamber and protrudes out of the limbal/scleral junction. A portion of the outer surface of the conduit adjacent to the plate has a porous ingrowth surface area to enhance anchoring of the conduit to the surrounding extraocular tissues. The plate has a smooth anterior surface and a porous posterior surface. This device uses porous surfaces to enhance cellular infiltration and ingrowth to increase apposition with surrounding tissues, decrease micromovement of the implant, and thereby decrease the fibrous capsule formation surrounding the episcleral plate. Long-term failure of glaucoma drainage devices has been linked to thickening of the filtering bleb due to excessive fibrous capsule formation.



Apparatus for lowering the intraocular pressure of an eye WO9721406 A1

Current assignees

MEDTRONIC XOMED
WOUND HEALING OF OKLAHOMA*

Inventors

NORDQUIST ROBERT E
LI BING

Priority data including date

1994US-08279506 1994-07-22
1995US-08570400 1995-12-11
1996WO-US07724 1996-05-24
1998KR-7004394 1998-06-11

IPC - International classification

A61F-002/14* A61F-009/007* A61M-005/00

CPC - Cooperative classification

A61F-009/007/81*

PCL - US patent classification

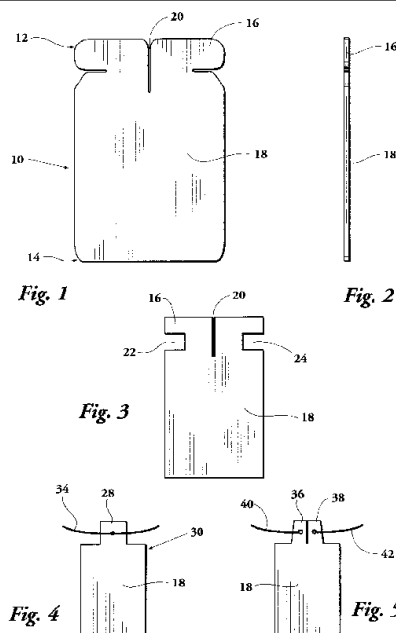
PCLO: 604008000*

Family

WO9721406	A1	1997-06-19	EP0866680	B1	2005-03-16
CA2240146	A1	1997-06-19	AT290838	T	2005-04-15
AU5878296	A	1997-07-03	DE69634491	D1	2005-04-21
US5704907	A	1998-01-06	KR100478355	B1	2005-06-16
EP0866680	A1	1998-09-30	ES2239331	T3	2005-09-16
KR19990072086	A	1999-09-27	DE69634491	T2	2006-04-13
AU730161	B2	2001-03-01	JP4082729	B2	2008-04-30
JP2001517097	A	2001-10-02	CA2240146	C	2010-03-09

(EP-866680)

An apparatus for lowering the intraocular pressure of an eye is provided. The apparatus of the invention is a filtering implant comprising a cellulosic membrane adapted to extend from the anterior chamber of the eye through an opening in the limbus corneae to a drainage area beneath a scleral flap. In its most preferred embodiment, the cellulosic membrane consists essentially of a homopolymer of glucose units connected in a 1,4'-beta linkage. The implant is of a planar, generally rectangular shape. The method of the invention involves preparing and implanting the device within the eye such that it extends from the anterior chamber of the eye through an opening in the limbus corneae to a drainage area beneath a scleral flap.



Ophthalmic shunt US5601094 A

Current assignees

REISS; GEORGE R.

Inventors

REISS GEORGE R

Priority data including date

1994US-08346213 1994-11-22

IPC - International classification

A61F-009/007*

CPC - Cooperative classification

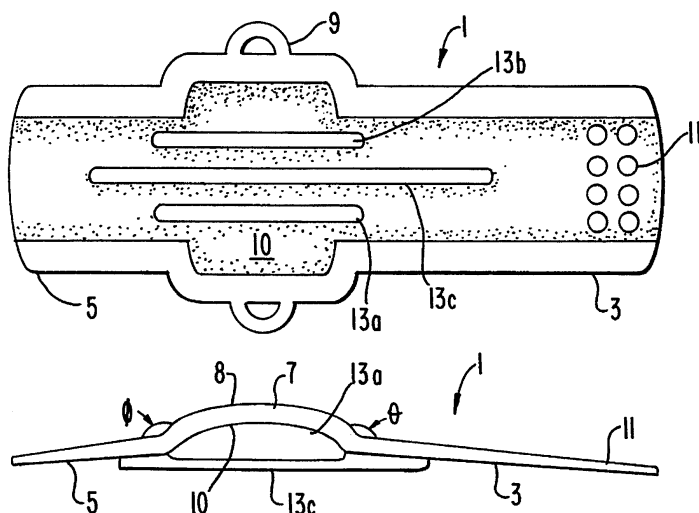
A61F-009/007/81*

PCL - US patent classification**PCLO:** 128899000***PCLX:** 604008000**Family**[US5601094](#)

A 1997-02-11

(US5601094)

The invention is directed to an ophthalmic shunt implantable in a human eye. The shunt includes a central portion, an anterior tab extending from one end of the central portion and a posterior tab extending from an opposite end of the central portion. The tabs are disposed at an angle to the central portion. When the shunt is implanted, the curvature substantially corresponds to the exterior curvature of the eye at and adjacent to the location of the limbus, and the overall length of the shunt is sufficient to allow the anterior tab to be disposed intracorneally and the posterior tab to extend into a suprachoroidal space formed between the sclera and the choroid. During implantation, an opening is formed at the location of the limbus and extends into the anterior chamber of the eye. The shunt is disposed to bridge the opening and maintains a gap above the opening. Accordingly, the aqueous fluid from the anterior chamber flows along the shunt and into the suprachoroidal space, thereby reducing the intraocular pressure.



"spare parts" for ophthalmic surgical procedures. IL--89106 A

Current assignees

LANGERMAN DAVID W*

Inventors

LANGERMAN DAVID W

Priority data including date

1988US-07154196 1988-02-10

1989EP-0902113 1989-01-09

1989WO-US00073 1989-01-09

US7698493 1993-06-15

IPC - International classification

A61F-002/00 A61F-002/14 A61F-002/16

A61F-009/007 A61L-027/00* A61L-027/14

A61L-027/22 A61L-027/52

CPC - Cooperative classification

A61F-002/00 A61F-002/14* A61F-002/16

A61F-002/16/94 A61F-009/00 A61F-009/007

A61L-027/14 A61L-027/22/7 A61L-027/52

A61L-2430/16 C08L-005/08 C08L-033/12

C08L-081/06 C08L-083/04

PCL - US patent classification

PCLO: 623006390* 623006390*

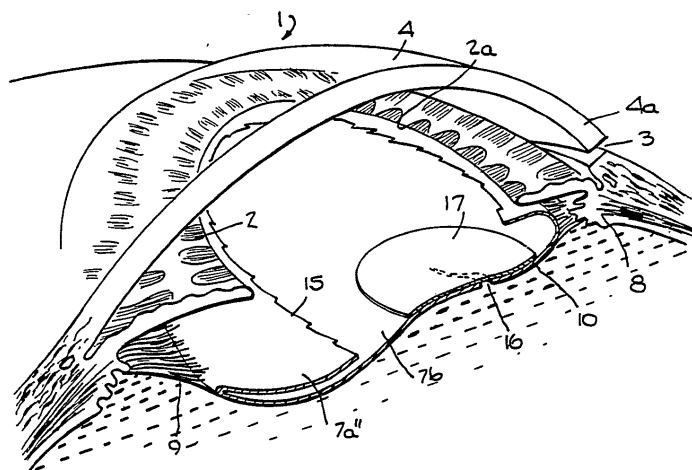
PCLX: 606107000 606151000 623004100
623005110

Family

IL89106	A	1989-08-15	JPH0551302	B2	1993-08-02
WO8907426	A1	1989-08-24	IL89106	B	1993-09-22
AU3041289	A	1989-09-06	EP0403495	B1	1994-04-06
US4888016	A	1989-12-19	AT103790	T	1994-04-15
EP0403495	A1	1990-12-27	DE68914446	D1	1994-05-11
EP0403495	A4	1991-04-10	DE68914446	T2	1994-07-28
JPH03504444	A	1991-10-03	USRE34998	E1	1995-07-18
CA1315489	C	1993-04-06	CA1339341	E	1997-08-26

(EP-403495)

For use in ophthalmic surgery, the surgeon has available a supply of "spare parts" which are artificial members (17), possibly simulating different components of the eye (1), that are suited, depending on their structural forms and shapes, for surgical implantation in the eye (1) as and/or in connection with repair and/or reinforcement and/or replacement structures for damage or diseased eye components. The members (17) basically are made of cohesive sheet materials of biocompatible substances such as cross-linked hyaluronic acid, PMMA, or other equivalents thereof. Certain of such "spare parts" are particularly well suited for dealing with the problem of a torn posterior capsule (7b) when encountered during an extracapsular cataract extraction. For example, upon discovering a tear (16) in the posterior capsule (7b), the surgeon can select a disk (17) and introduce it into the eye (1) in overlying



relation to the tear (16) to serve as a patch (17) on the posterior capsule (7b).

Exhaust steam injector US2002156 A

Current assignees

COMBUSTION ENGINEERING SUPERHEATER*

Inventors

EMANUEL RAWSON

Priority data including date

1934US-01714384 1934-03-07

IPC - International classification

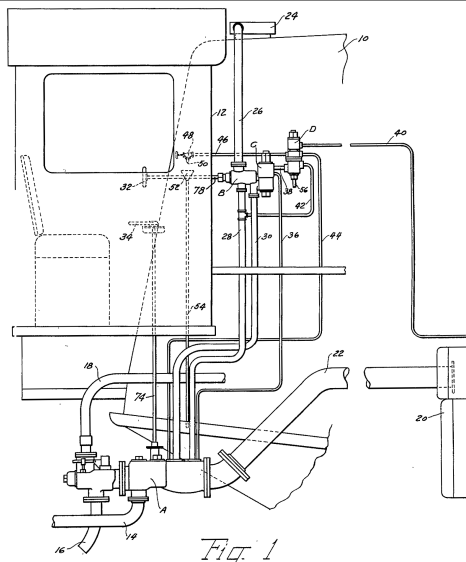
F04F-005/46*

CPC - Cooperative classification

F04F-005/46/9*

PCL - US patent classification**PCLO:** 417180000***Family**[US2002156](#)

A 1935-05-21



INVENTOR
EMANUEL RAWSON.
BY *O. V. Hall*
ATTORNEY

Packing crate
US2013150 A

Current assignees

HENZE JOSEPH J

Inventors

HENZE JOSEPH J

Priority data including date

1933US-01674369 1933-06-05

IPC - International classification

B65D-021/032*

CPC - Cooperative classification

B65D-009/34*

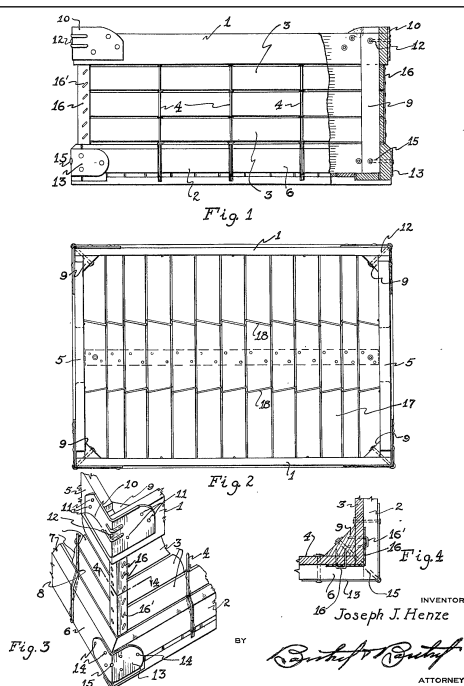
PCL - US patent classification

PCLO: 217065000*

Family

US2013150

A 1935-09-03



Electric lamp and the like and its mounting and electrical connection

NL--40440D C

Current assignees

GENERAL ELECTRIC
PATRA PATENT TREUHAND*
THOMSON HOUSTON

Inventors

BLAKE HAROLD D

Priority data including date

1933US-01667223 1933-04-21

IPC - International classification

H01K-001/46*

CPC - Cooperative classification

H01K-001/46*

PCL - US patent classification

PCLO: 439616000*

PCLX: 174017080 220002200 439619000

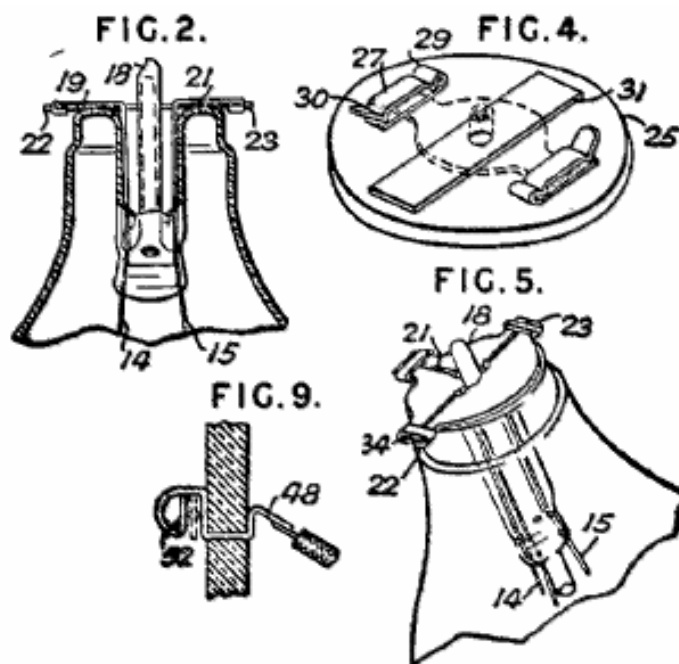
Family

NL40440	C	0	FR771921	A	1934-10-19
BE402737	A	0	US2006155	A	1935-06-25
GB415355	A	1934-08-23	DE622617	C	1935-12-02

(US2006155)

415,355. Thermionic valve caps and holders. BRITISH THOMSON-HOUSTON CO., Ltd., Crown House, Aldwych, London. April 20, 1934, No. 11972. Convention date, April 21, 1933. [Class 39 (i).] In a thermionic valve the contact terminals are formed by the leads 14, 15, which lie in slits 21 in an insulating disc 19 glued or cemented to the end of the bulb; the ends of the leads are bent over the ends of the projecting wings 22, 23 of the disc. A central hole allows the evacuating tube 18 to project beyond the end of the bulb, this tube forming centring means for the holder 25, Fig. 4; the receiving clips 27 on this holder are formed of spring metal with inclined parts 30, 29, to (i) guide the contacts into the clips and (ii) to form stops when the contacts are in place. Any number of contact wings may be formed on each disc and the ends may receive binding clamps 34, Fig. 5. The holder has a central raised part 31 against which the lamp bulb bears. When a large number of contacts are provided on each disc the holder contacts may be in the form of simple spring grips 52, Fig. 9, integral with extensions 48 for lead connection. Specification 147,293, [Class 39 (ii)], is referred to.

(From GB415355 A)



Permanent hair waving device US2005288 A

Current assignees

HAMILTON COOPER WILLIAM

Inventors

HAMILTON COOPER WILLIAM

Priority data including date

1932US-01646663 1932-12-10

IPC - International classification

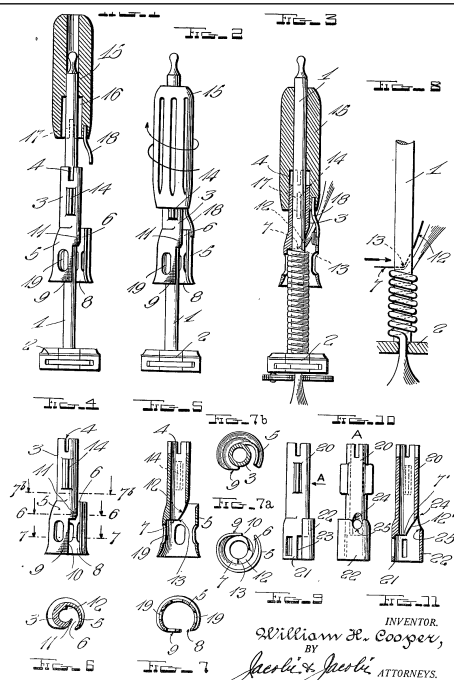
A45D-006/02*

CPC - Cooperative classification

A45D-006/02*

PCL - US patent classification**PCLO:** 132212000***Family**[US2005288](#)

A 1935-06-18



Devices and methods for placing a shunt into the intra-scleral space WO201385643 A1

Current assignees

AQUESYS*

Inventors

HORVATH CHRISTOPHER

Priority data including date

2011US-13314939 2011-12-08

2014US-14508938 2014-10-07

2016US-15005954 2016-01-25

IPC - International classification

A61F-002/82 A61F-009/00 A61F-009/007*

A61F-009/008 A61M-005/00* A61M-027/00

CPC - Cooperative classification

A61F-002/82 A61F-009/00/17 A61F-009/007

A61F-009/007/36 A61F-009/007/63 A61F-009/007/81*

A61F-2009/00861 A61F-2009/00865 A61F-2009/00872

A61M-027/00/2 A61M-2210/0612

PCL - US patent classification

PCLO: 604008000* 604008000* 604008000***PCLX:** 604093010 604158000 604159000

604160000 604264000 604265000 606108000

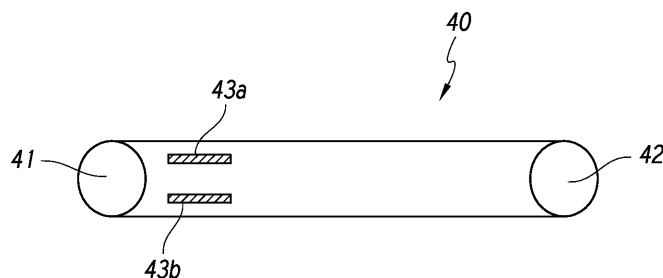
606167000 623001110 623004100 623005110

Family

[WO2013085643](#) A1 2013-06-13[US2013150770](#) A1 2013-06-13[US8852136](#) B2 2014-10-07[US2015045714](#) A1 2015-02-12[US9271869](#) B2 2016-03-01[US2016135993](#) A1 2016-05-19[US9883969](#) B2 2018-02-06

(WO201385643)

The present invention generally relates to intraocular shunts, and in particular, to intraocular shunts configured to form a drainage pathway between the anterior chamber and the intra-scleral space.



Flow regulating implants US20050288617 A1

Current assignees

HARDY JOSEPHINE B
OPT NORD RIMITIDO
OPTONOL*

Inventors

YARON IRA
DAHAN ELIE

Priority data including date

2004US-10875571 2004-06-25
2005WO-US21123 2005-06-16
2007US-11952754 2007-12-07

IPC - International classification

A61F A61F-002/14 A61F-009/007*
A61F-009/2007* A61M-005/00

CPC - Cooperative classification

A61F-009/007/81*

PCL - US patent classification

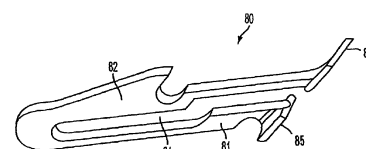
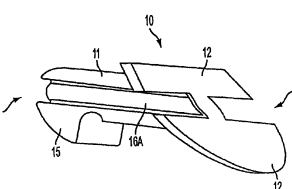
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PCLX: 604009000 604010000 604030000
604043000 604057000 604060000 604104000
604175000 604239000 604264000 604265000
604266000 604521000 604541000

Family

US2005288617	A1	2005-12-29	SG153828	A1	2009-07-29
WO2006012009	A2	2006-02-02	CN100577127	C	2010-01-06
CA2571871	A1	2006-02-02	CN101732125	A	2010-06-16
AU2005267539	A1	2006-02-02	US7862531	B2	2011-01-04
WO2006012009	A3	2006-03-09	JP4723577	B2	2011-07-13
KR20070031943	A	2007-03-20	US8034016	B2	2011-10-11
EP1765234	A2	2007-03-28	AU2005267539	B2	2011-12-08
IL180170	A	2007-06-03	CN101732125	B	2012-07-04
IN0079/DELNP/2007	A	2007-08-03	KR101280961	B1	2013-07-02
CN101076305	A	2007-11-21	CA2571871	C	2014-02-04
JP2008504063	A	2008-02-14	IL180170	B	2014-10-30
US2008077071	A1	2008-03-27	IN282891	B	2017-05-19

(EP1765234)

A flow regulating implant is provided with one or more grooves for allowing fluid flow. One or more grooves may have a constant or varying cross-section along its length. One or more grooves may have in it biodegradable material, absorbable material, and/or threads or sutures. A resilient band or coating may be placed around the implant or one or more grooves, to act as a pressure regulator. The implant may have a side projection, such as a side pin, for engaging tissue. The implant may comprise two or more parts that are held at a distance from each other to allow fluid flow between the parts.



Uveoscleral drainage device US20040015140 A1

Current assignees

YALE UNIVERSITY*

Inventors

SHIELDS MILTON B

Priority data including date

2002US-60397565 2002-07-19

2003CA-2493010 2003-07-21

2003EP-0765883 2003-07-21

2003US-10624882 2003-07-21

2003WO-US22832 2003-07-21

2006US-11374398 2006-03-13

2008EP-0173090 2003-07-21

IPC - International classification

A61B-017/32 A61F-009/00 A61F-009/007*

A61M A61M-005/00 A61M-019/00

A61M-025/06 A61M-027/00 A61M-031/00

CPC - Cooperative classification

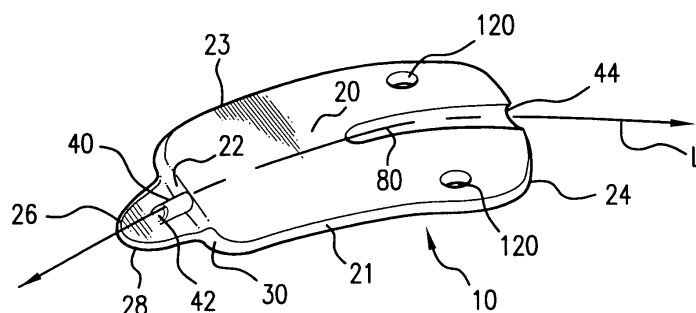
A61F-009/007/81*

PCL - US patent classification**PCLO:** 604008000* 604008000***PCLX:** 604093010 604264000 606167000
606172000**Family**

US2004015140	A1	2004-01-22	EP1534363	B1	2008-12-31
WO2004008945	A2	2004-01-29	AT419026	T	2009-01-15
CA2744117	A1	2004-01-29	DE60325606	D1	2009-02-12
CA2493010	A1	2004-01-29	EP2039380	A2	2009-03-25
AU2003256657	A1	2004-02-09	ES2320121	T3	2009-05-19
AU2003256657	A8	2004-02-09	US7662123	B2	2010-02-16
WO2004008945	A9	2004-06-10	CN100591372	C	2010-02-24
WO2004008945	A3	2005-02-03	HK1084313	A1	2010-06-25
EP1534363	A2	2005-06-01	BRPI0312816	A2	2010-07-27
MXPA05000807	A	2005-06-17	CN101791258	A	2010-08-04
ZA200501458	B	2005-09-07	EP2286773	A1	2011-02-23
CN1684728	A	2005-10-19	EP2039380	A3	2011-02-23
US7041077	B2	2006-05-09	CA2493010	C	2011-09-13
US2006155238	A1	2006-07-13	EP2039380	B1	2012-03-21
EP1534363	A4	2006-09-13	AT550056	T	2012-04-15
BR0312816	A	2007-06-26	EP2286773	B1	2012-10-17
BRPI0312816	A1	2007-06-26			

(EP2286773)

An ophthalmic shunt (10) implantable in an eye having an elongate body (20) and a conduit (40) for conducting aqueous humor from an anterior chamber of the eye to the suprachoroidal space of the eye. The elongate body has a forward end (22) and an insertion head (26) that extends from the forward end. The insertion head defines a shearing edge (28) suitable for cutting eye tissue engage thereby. The forward end and the insertion head of the body define a shoulder surface (30). The conduit has a first end defined on



a portion of a top surface of the insertion head. The conduit also extends through the body from the forward end to a back end thereof. The first end of the conduit is spaced from the shearing edge and, in one example, from the shoulder of the body.

A glaucoma shunt and a method of making and surgically implanting the same WO200064511 A1

Current assignees

ARIZONA BOARD OF REGENTS
UNIVERSITY OF ARIZONA

Inventors

WILLIAMS STUART K
SNYDER ROBERT

Priority data including date

1999US-09300388 1999-04-27
2000WO-US06687 2000-04-27

IPC - International classification

A61F-009/007*	A61L-031/04	A61L-031/06
A61L-031/12	A61L-031/14	

CPC - Cooperative classification

A61F-009/007/81	A61L-031/04/4	A61L-031/04/7
A61L-031/04/8	A61L-031/06	A61L-031/12/5
A61L-031/14/6*	A61L-2430/16	Y10S-623/905

PCL - US patent classification

PCLO:	604008000*		
PCLX:	427002250	604294000	604521000
	606107000	623905000	

Family

[WO200064511](#) A1 2000-11-02
[AU4796200](#) A 2000-11-10

[US2002156413](#) A1 2002-10-24
[US6699210](#) B2 2004-03-02

(WO200064511)

A glaucoma shunt (10) including first (11) and second (12) porous regions laminated together, and a third (13) region having edge areas fused to edge areas of the second region so as to form a hollow reservoir therebetween. Also included is a catheter (7) having a first end (8) sandwiched between the second and third regions and a second end (14) to be implanted into an interior region (22) of an eye (20). A method of making and surgically implanting such a glaucoma shunt is also included.

