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- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,

KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

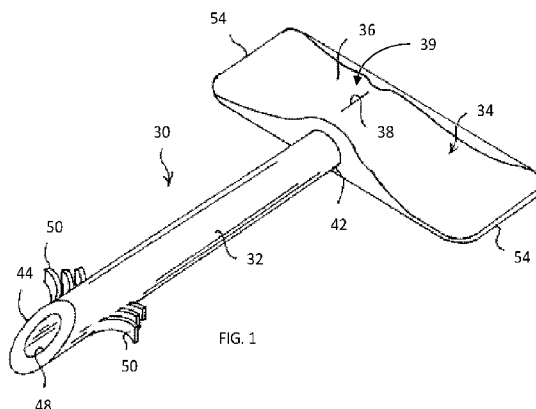
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- with international search report (Art. 21(3))
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29 June 2017

(54) **Title:** APPARATUS FOR REDUCING INTRAOCULAR PRESSURE AND METHOD FOR MANUFACTURING SUCH APPARATUS



(57) **Abstract:** An apparatus for reducing/stabilizing intraocular pressure is provided. A tube extends from an inlet end in fluid communication with an anterior chamber of the eye, to direct an aqueous humor flow from the anterior chamber to an outlet end in fluid communication with a cavity, defined by a housing, for receiving the aqueous humor. A flow control device is operably engaged with the housing, and is configured to control the flow of the aqueous humor, via a conduit defined thereby and extending from the cavity, to a location away from the anterior chamber. The conduit is dilatable in response to the intraocular pressure being above a preselected pressure, to increase the flow or to decrease resistance to flow of the aqueous humor through the conduit to the drainage site and to reduce the intraocular pressure to no greater than the preselected pressure. Associated apparatuses and methods are also provided.

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER INV. A61F9/007 A61M5/168 ADD.		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) A61F A61M F16K		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2010/057055 A1 (CAMRAS CARL B [US] ET AL) 4 March 2010 (2010-03-04)	1-5, 14-19, 22-26,34
Y	paragraphs [0011], [0036] - [0038], [0051], [0062], [0069]; claim 1; figures 1,16,20,21A,21B	6-9,20, 27-30

X	US 2013/150778 A1 (DOS SANTOS CESARIO P [US]) 13 June 2013 (2013-06-13)	1,15-17, 19-21
A	paragraphs [0010], [0011], [0025], [0029] - [0051]; claims 1,16,26,27; figures 2-5	6,10,11, 18,22, 27-34

Y	US 2013/150779 A1 (FIELD LESLIE A [US]) 13 June 2013 (2013-06-13)	6-9,20, 27-30
A	paragraphs [0008], [0042], [0106]; claims 1,2,4-9.13,14,17,20,26; figures 7-11	1,11, 14-19, 22,34

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☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search	Date of mailing of the international search report	
17 May 2017	23/05/2017	
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Merté, Birgit	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2016/046579

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-34

Drainage device and its method of manufacture, the drainage device comprising a housing having various technical features defined by dependent claims

2. claims: 35-38

drainage device comprising a second filter device

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2016/046579

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2004/127843 A1 (TU HOSHENG [US] ET AL) 1 July 2004 (2004-07-01) paragraphs [0043], [0045], [0048], [0049], [0207], [0289], [0461]; figure 3 -----	18,20,21
Y	US 4 886 488 A (WHITE THOMAS C [US]) 12 December 1989 (1989-12-12)	35
A	column 1, lines 9-12 column 2, lines 40-58 column 4, lines 40-58 -----	4
Y	US 5 171 213 A (PRICE JR FRANCIS W [US]) 15 December 1992 (1992-12-15) column 2, lines 27-52 column 3, line 10 - column 6, line 44; claims 1-5,7; figures 1a, 1b,3a,3b,5a,5b -----	35-38
Y	US 2004/073156 A1 (BROWN J DAVID [US]) 15 April 2004 (2004-04-15) paragraphs [0041], [0058]; claim 1; figures -----	35-38

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2016/046579

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010057055	A1	04-03-2010	NONE
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US 2013150779	A1	13-06-2013	US 2013150779 A1 13-06-2013 WO 2013090231 A1 20-06-2013
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