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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, LT, 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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[Continued on next page]

- (54) **Title:** LACRIMAL SYSTEM DRUG DELIVERY DEVICE

(57) **Abstract:** This invention is in the field of medical intervention related to the lacrimal system. The invention relates to a lacrimal system device and methods of using the device for drug delivery to the eye, sinuses and/or periocular tissues.

FIGURE 1





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PCT/US 14/11477

<p>A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - A61M 37/00, A61M 35/00 (2014.01) CPC - A61F 9/0026, A61F 9/00772 According to International Patent Classification (IPC) or to both national classification and IPC</p>																			
<p>B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC(8): A61M 37/00, A61M 35/00 (2014.01) CPC: A61F 9/0026, A61F 9/00772</p>																			
<p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC:604/2*</p>																			
<p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Patbase, Google (Web, Images, Patents, Scholar) Reservoir, loading, port, exit, lacrimal, drug, delivery, system, elastic, sac, nasal, tird, tube, first, second, bio-erodable, microelectromechanical, springs, pressure, regulator, ophthalmic, insert, device, micro, non, porous, ePTFE, membrane ocular, valve, cut, off,</p>																			
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:10%;">Category*</th> <th style="width:70%;">Citation of document, with indication, where appropriate, of the relevant passages</th> <th style="width:20%;">Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X ----- Y ----- A</td> <td>US 2008/0086101 A1 (Freilich) 10 April 2008 (10.04.2008) entire document, especially fig. 1-5, para [005], [0013], [0016]-[0017], [0020]- [0023].</td> <td>1, 4-5, 12-14, 18, 23, 27, 30 ----- 9-11, 15, 24, 31-32 ----- 2-3, 6-8, 16-17, 19- 22, 25-26, 28-29</td> </tr> <tr> <td>Y ----- A</td> <td>US 8,034,370 B2 (Shiah et al.) 11 October 2011 (11.10.2011) entire document, especially Abstract, col 12, ln 58-60</td> <td>9, 24 ----- 2-3, 6-8, 16-17, 19- 22, 25-26, 28-29</td> </tr> <tr> <td>Y ----- A</td> <td>WO 2009/032328 A1 (Rapacki) 12 March 2009 (12.03.2009) entire document, especially pg 29, ln 23-30, pg 54, ln 28-30, pg 55, ln 1-7</td> <td>15, 31-32 ----- 2-3, 6-8, 16-17, 19- 22, 25-26, 28-29</td> </tr> <tr> <td>Y</td> <td>US 3,828,777 A (Ness) 13 August 1974 (13.08.1974) entire document, especially Title; Abstract; col 3, ln 15-23</td> <td>10</td> </tr> <tr> <td>Y</td> <td>US 6,881,198 B2 (Brown) 19 April 2005 (19.04.2005) entire document, especially col 6, ln 32-38</td> <td>11</td> </tr> </tbody> </table>		Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X ----- Y ----- A	US 2008/0086101 A1 (Freilich) 10 April 2008 (10.04.2008) entire document, especially fig. 1-5, para [005], [0013], [0016]-[0017], [0020]- [0023].	1, 4-5, 12-14, 18, 23, 27, 30 ----- 9-11, 15, 24, 31-32 ----- 2-3, 6-8, 16-17, 19- 22, 25-26, 28-29	Y ----- A	US 8,034,370 B2 (Shiah et al.) 11 October 2011 (11.10.2011) entire document, especially Abstract, col 12, ln 58-60	9, 24 ----- 2-3, 6-8, 16-17, 19- 22, 25-26, 28-29	Y ----- A	WO 2009/032328 A1 (Rapacki) 12 March 2009 (12.03.2009) entire document, especially pg 29, ln 23-30, pg 54, ln 28-30, pg 55, ln 1-7	15, 31-32 ----- 2-3, 6-8, 16-17, 19- 22, 25-26, 28-29	Y	US 3,828,777 A (Ness) 13 August 1974 (13.08.1974) entire document, especially Title; Abstract; col 3, ln 15-23	10	Y	US 6,881,198 B2 (Brown) 19 April 2005 (19.04.2005) entire document, especially col 6, ln 32-38	11
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<p><input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/></p>																			
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<p>Date of the actual completion of the international search</p> <p>14 November 2014 (14.11.2014)</p>	<p>Date of mailing of the international search report</p> <p align="center">01 DEC 2014</p>																		
<p>Name and mailing address of the ISA/US</p> <p>Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201</p>	<p>Authorized officer:</p> <p align="center">Lee W. Young</p> <p>PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774</p>																		