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(71) Applicant (for all designated States except US): **BAUSCH & LOMB INCORPORATED** [US/US]; Bausch & Lomb Place, Rochester, NY 14604-2701 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ENGIN, Emin** [US/US]; 102 Hollenbeck Street, Rochester, NY 14621 (US). **RICHARDSON, Gary, A.** [US/US]; 1661 Norton

Street, Rochester, NY 14609 (US). **WAGNER, Christopher, E.** [US/US]; 474-B Clay Road, Rochester, NY 14623 (US).

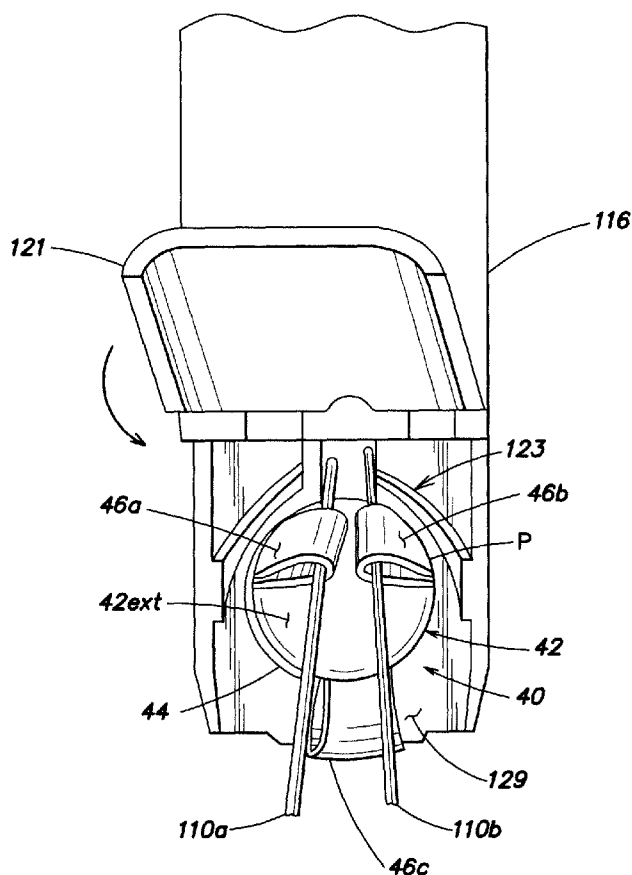
(74) Agents: **POWERS, Jeffrey, B.** et al.; Bausch & Lomb Incorporated, One Bausch & Lomb Place, Rochester, NY 14604-2701 (US).

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[Continued on next page]

(54) Title: METHOD OF PREPARING A MULTIELEMENT INTRAOCULAR LENS FOR INSERTION



(57) Abstract: A method of folding a multiple element IOL comprising folding the first lens element and second lens element such that the second lens element at least partially surrounds the first lens element and such that, after folding, both the first lens element and the second lens element are substantially aligned along the optical axis. A hinged apparatus such as a cartridge may be used to cause the second lens element to be folded. A method of loading a multielement IOL comprising folding the haptics such that a portion of the haptics contacts an exterior side of one of the first lens element and the second lens element.

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**Declaration under Rule 4.17:**

- *as to the identity of the inventor (Rule 4.17(i))*

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# INTERNATIONAL SEARCH REPORT

International application No  
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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> INV. A61F2/16				
According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b>				
Minimum documentation searched (classification system followed by classification symbols) A61F				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
A	WO 2005/074838 A (VISIOGEN INC [US]; TSAI GEORGE [US]) 18 August 2005 (2005-08-18)  paragraphs [0032], [0035], [0036], [0039]; claims 1,11,12,14; figures 2,6,7,9-11	1-7, 9-13,43, 45,47,48		
A	US 2004/160575 A1 (AYTON IAN [US] ET AL) 19 August 2004 (2004-08-19) paragraphs [0065], [0066], [0071], [0073]; claims 1,6,12,13,16; figures 15-18	1,4,6,10		
A	WO 01/34067 A (BAUSCH & LOMB SURGICAL INC [US]) 17 May 2001 (2001-05-17) page 19, lines 2-5; figures 8,9  ----- -/--	1,3		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.				
<input checked="" type="checkbox"/> See patent family annex.				
* Special categories of cited documents :				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;">                     *A* document defining the general state of the art which is not considered to be of particular relevance                      *E* earlier document 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                 </td> <td style="width: 50%; border: none; vertical-align: top;">                     *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.                      *&amp;* document member of the same patent family                 </td> </tr> </table>			*A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document 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
*A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document 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  <p style="text-align: center; font-weight: bold;">26 August 2008</p>	Date of mailing of the international search report  <p style="text-align: center; font-weight: bold;">01/09/2008</p>			
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  <p style="text-align: center; font-weight: bold;">Merté, Birgit</p>			

## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2007/081747

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 828 558 A (KELMAN CHARLES D [US]) 9 May 1989 (1989-05-09) column 3, line 35 - column 4, lines 9-13	18-23
Y	column 5, lines 27-41	32, 39, 40, 43
A	column 7, lines 17-22; figures 3, 6	1, 14, 24-27, 47, 48
Y	----- WO 99/29267 A (ALLERGAN SALES INC [US]) 17 June 1999 (1999-06-17)	28, 32, 39, 40
A	page 7, lines 18-23; figures 7, 9, 10	2, 34-37
A	----- US 5 100 410 A (DULEBOHN DAVID H [US]) 31 March 1992 (1992-03-31) abstract; figures	8
X	----- WO 01/56508 A (ACCOMMO AG [CH]; HAEFLIGER EDUARD ANTON [CH]) 9 August 2001 (2001-08-09)	18-20, 22, 25
Y	page 2, line 37 - page 3, line 26	28, 32, 39, 40, 43
A	page 5, line 18 - line 23  page 6, lines 6-31; claims 3, 5, 9; figure 2	21, 24, 26, 27, 47, 48
Y	----- EP 1 481 652 A (ALCON INC [CH]) 1 December 2004 (2004-12-01)	43
A	paragraph [0013]	45
A	----- EP 1 360 944 A (CANON STAAR CO INC [JP]) 12 November 2003 (2003-11-12) paragraph [0049]	43

# INTERNATIONAL SEARCH REPORT

International application No.  
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## 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.: 15-17, 30, 31, 41  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery Inserting an IOL in an eye is an invasive step performed in by an ophthalmologist during eye surgery
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: 1-14

A method of facilitating loading a multielement IOL having a plurality of haptics coupling a first lens element and a second lens element into an injector, wherein at least one of the haptics is folded radially inward while the first lens element and the second lens element are substantially aligned along the optical axis.

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## 2. claims: 18-29

A method of folding a multiple element IOL comprising first and second lens elements aligned along an optical axis such that the second lens element at least partially surrounds the first lens element and, after folding, both lens elements are substantially aligned along the optical axis and at least a portion of an interior surface of the second lens element contacts at least a portion of an exterior surface of the first lens element.

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## 3. claims: 32-40,42

A method of facilitating loading an IOL inserter with an IOL comprising first and second lens elements aligned along an optical axis, wherein the second lens element is located on a hinged apparatus and the hinged portions are rotated to cause the second lens element to be folded such that the second lens element at least partially surrounds the first lens element and such that, after folding, both the first lens element and the second lens element are substantially aligned along the optical axis.

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## 4. claims: 43-48

A method of facilitating loading an IOL inserter with an IOL comprising first and second lens elements aligned along an optical axis, wherein the second lens element is located on a hingeless cartridge, pushing the IOL along the lumen causing the second lens element to be folded such that the second lens element at least partially surrounds the first lens element and such that, after folding, both lens elements are substantially aligned along the optical axis.

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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/081747

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 2005074838	A	18-08-2005	EP 1711129 A2 US 2005182419 A1	18-10-2006 18-08-2005
US 2004160575	A1	19-08-2004	AU 2004212917 A1 CA 2515909 A1 EP 1592366 A2 JP 2006517837 T US 2008045971 A1 WO 2004073560 A2	02-09-2004 02-09-2004 09-11-2005 03-08-2006 21-02-2008 02-09-2004
WO 0134067	A	17-05-2001	AR 026330 A1 AT 384493 T AU 774948 B2 AU 1229301 A BR 0015569 A CA 2389923 A1 CN 1384727 A CN 1720877 A EP 1227773 A1 ES 2300278 T3 JP 2003513705 T MX PA02004423 A US 6767363 B1 US 2004230300 A1	05-02-2003 15-02-2008 15-07-2004 06-06-2001 30-07-2002 17-05-2001 11-12-2002 18-01-2006 07-08-2002 16-06-2008 15-04-2003 02-09-2002 27-07-2004 18-11-2004
US 4828558	A	09-05-1989	NONE	
WO 9929267	A	17-06-1999	DE 69826027 D1 DE 69826027 T2 EP 1037573 A1 JP 4031617 B2 JP 2001525221 T US 6142999 A US 5947974 A	07-10-2004 08-09-2005 27-09-2000 09-01-2008 11-12-2001 07-11-2000 07-09-1999
US 5100410	A	31-03-1992	AU 1039692 A CA 2059623 A1 EP 0497505 A1 JP 4309348 A	30-07-1992 29-07-1992 05-08-1992 30-10-1992
WO 0156508	A	09-08-2001	AU 2543401 A CA 2399406 A1 EP 1251801 A1 JP 2003521335 T US 2003004569 A1	14-08-2001 05-03-2003 30-10-2002 15-07-2003 02-01-2003
EP 1481652	A	01-12-2004	AT 343985 T AU 2004200811 A1 BR 0400262 A CA 2457320 A1 DE 602004002987 T2 DK 1481652 T3 ES 2275145 T3 JP 2004351196 A KR 20040104394 A MX PA04002543 A US 2004243141 A1 ZA 200401190 A	15-11-2006 16-12-2004 05-04-2005 28-11-2004 21-06-2007 05-03-2007 01-06-2007 16-12-2004 10-12-2004 02-12-2004 02-12-2004 26-08-2004

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2007/081747

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1360944	A	12-11-2003	AT 372748 T	15-09-2007
			CN 1456134 A	19-11-2003
			DE 60316216 T2	29-05-2008
			US 2003212406 A1	13-11-2003

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