

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
10 July 2008 (10.07.2008)

PCT

(10) International Publication Number
WO 2008/082957 A3

(51) International Patent Classification:
A61F 2/16 (2006.01)

(21) International Application Number:

PCT/US2007/087944

(22) International Filing Date:

18 December 2007 (18.12.2007)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

11/646,913 27 December 2006 (27.12.2006) US

(71) Applicant (for all designated States except US): **POW-
ERVISION, INC.** [US/US]; 298 Harbor Drive, Belmont,
CA 94002 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SMITH, David,
John** [US/US]; 3613 Piedmont Drive, Highland, CA
92346 (US). **SMILEY, Terah, Whiting** [US/US]; 1563
C Pershing Drive, San Francisco, CA 94129 (US).
SCHOLL, John, A. [US/US]; 2728 Derby Drive, San
Ramon, CA 94583 (US). **BURNS, Denise, Horrilleno**
[US/US]; 741 San Diego Avenue, Sunnyvale, CA 94085
(US). **ESCH, Victor** [US/US]; 5808 Canyon Vista Drive,
N.e., Albuquerque, NM 87111 (US).

(74) Agents: **ZLOGAR, Thomas, M.** et al.; Shay Glenn Llp,
2755 Campus Drive, Suite 210, San Mateo, CA 94403
(US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH,
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, IS, JP, KE, KG, KM, 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, PG, PH, PL,
PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA,
ZM, ZW.

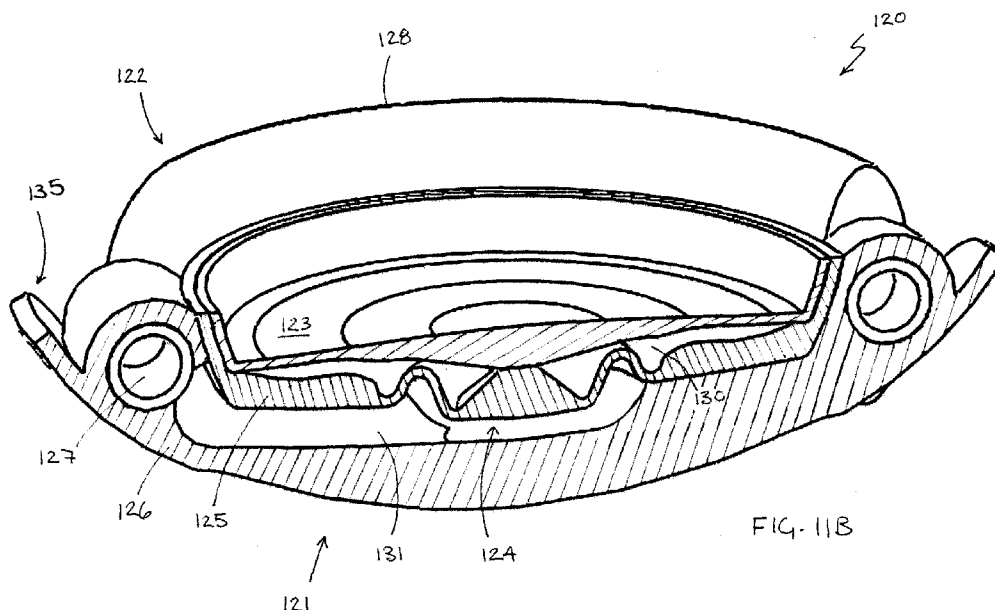
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL,
PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: ACCOMMODATING INTRAOCULAR LENS SYSTEM HAVING SPHERICAL ABERRATION COMPENSATION
AND METHOD



(57) Abstract: An accommodating intraocular lens includes an optic portion, a haptic portion. The optic portion of the lens includes an actuator that deflects a lens element to alter the optical power of the lens responsive to forces applied to the haptic portion of the lens by contraction of the ciliary muscles and a secondary deflection mechanism. Movement of the lens element by the actuator causes the lens element to deform and the secondary deflection mechanism causes the lens to further deform.

WO 2008/082957 A3



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) **Date of publication of the international search report:**
24 December 2008

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/87944

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61F 2/16 (2008.04)

USPC - 623/6.11

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)

IPC(8): A61F 2/16 (2008.04)

USPC: 623/6.11

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
623/4.1

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST (PGPB, USPT, EPAB, JPAB); Google

Intraocular lens, accommodate, adjust, haptic, support, capsule, actuator, optic, implant

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2006/0041307 A1 (Esch, et al.) 23 February 2006 (23.02.2006), para [0074], [0076], [0046], [0047], [0074], [0076], Figs. 3-7	1, 2, 7-12, 14, 25, 26 ----- 3-6, 13, 15-24, 27, 28
Y	US 2004/0169816 A1 (Esch) 02 September 2004 (02.09.2004), Figs. 3A-3B; 22: para [0046], [0038], [0042], [0045], [0044], [0092] Figs. 5, 6	3-6, 13, 15-23, 27, 28
Y	US 4,432,966 A (Christie, et al.) 12 June 1990 (06.12.1990), col 3, ln 34-40	24

☐

Further documents are listed in the continuation of Box C.

☐

* 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

10 October 2008 (10. 10. 2008)

Date of mailing of the international search report

23 OCT 2008

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer

Lee W. Young

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774