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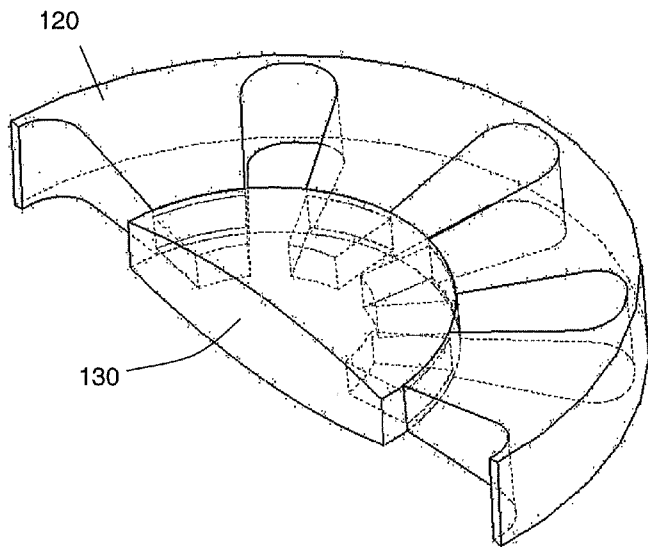
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(54) Title: HAPTIC FOR ACCOMMODATING INTRAOCULAR LENS



(57) Abstract: An intraocular lens is disclosed, with an optic that changes shape in response to a deforming force exerted by the zonules of the eye. A haptic (120) supports the optic around its equator and couples the optic to the capsular bag of the eye. The region of contact between the optic and the haptic extends into the edge of the optic (130), similar to the interface between a bicycle tire and the rim that holds it in place. The haptic may be stiffer than the optic. The haptic may have the same refractive index as the optic. The haptic may include a saddle-shaped portion in contact with the adjustable optic, with a convex profile along an optical axis; and a concave profile in a plane perpendicular to the optical axis.

Fig. 14



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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)
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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2004/082993 A1 (WOODS RANDALL [US]) 29 April 2004 (2004-04-29) paragraph [0046] paragraph [0049] figure 2	1-32
Y	----- US 2005/125058 A1 (CUMMING J S [US] ET AL) 9 June 2005 (2005-06-09) paragraph [0029] - paragraph [0030]; figures 1a-g	1-32
Y	----- US 2004/015235 A1 (WORST JAN GERBEN FRANS [NL] ET AL) 22 January 2004 (2004-01-22) paragraph [0056]	14-27
Y	----- US 2005/021139 A1 (SHADDUCK JOHN H [US]) 27 January 2005 (2005-01-27) paragraph [0070]; claims 5-7	14-27
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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 2005/085907 A1 (HANNA KHALIL [FR]) 21 April 2005 (2005-04-21) paragraph [0051] - paragraph [0052]; figures 1-3 -----	1-32
A	EP 0 492 126 A (AMERICAN CYANAMID CO [US]) 1 July 1992 (1992-07-01) claim 1 -----	

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004082993	A1	29-04-2004	CA 2503961 A1 06-05-2004
			EP 1562521 A2 17-08-2005
			WO 2004037127 A2 06-05-2004
			US 2006212116 A1 21-09-2006
			US 2004111153 A1 10-06-2004
US 2005125058	A1	09-06-2005	AU 2004296740 A1 23-06-2005
			CA 2547132 A1 23-06-2005
			EP 1691724 A1 23-08-2006
			JP 2007512907 T 24-05-2007
			WO 2005055884 A1 23-06-2005
US 2004015235	A1	22-01-2004	US 2006004445 A1 05-01-2006
			US 2005288683 A1 29-12-2005
US 2005021139	A1	27-01-2005	NONE
US 2005085907	A1	21-04-2005	NONE
EP 0492126	A	01-07-1992	AT 162066 T 15-01-1998
			AU 649758 B2 02-06-1994
			AU 9005991 A 02-07-1992
			BR 9105630 A 01-09-1992
			CA 2058350 A1 28-06-1992
			DE 69128703 D1 19-02-1998
			DE 69128703 T2 30-04-1998
			ES 2110973 T3 01-03-1998
			JP 3342031 B2 05-11-2002
			JP 4295353 A 20-10-1992
			US 5326506 A 05-07-1994
			US 5217491 A 08-06-1993