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Shaddock

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(54) **INTRAOCULAR IMPLANT DEVICES**

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See application file for complete search history.

(57) **ABSTRACT**

A deformable intracapsular implant device for shaping an enucleated lens capsule sac for use in cataract procedures and refractive lensectomy procedures. In one embodiment, the intraocular implant devices rely on thin film shape memory alloys and combine with the post-phaco capsular sac to provide a biomimetic complex that can mimic the energy-absorbing and energy-releasing characteristics of a young accommodative lens capsule. In another embodiment, the capsular shaping body is combined with an adaptive optic. The peripheral capsular shaping body carries at least one fluid-filled interior chamber that communicates with a space in a adaptive optic portion that has a deformable lens surface. The flexing of the peripheral shaping body in response to zonular tensioning and de-tensioning provides an inventive adaptive optics mechanism wherein fluid media flows between the respective chambers "adapts" the optic to increase and decrease the power thereof. In one embodiment, the capsular shaping body carries a posterior negative power adaptive optic that can be altered in power during accommodation to cooperate with an independent drop-in exchangeable intraocular lens.

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19 Claims, 31 Drawing Sheets

