

contact portions 32 and 50 will spread into larger contact with the anatomy of the eye. The tapering of beam portions 38, 40, 52 and 54 have been designed to cause these beam portions to remain reasonably rigid under the influence of forces exerted by compressing the lens. The tapering of the support portion to become wider in the plane of the fenestration as one proceeds from the beam portions toward the optic and to become narrower in a direction measured substantially parallel to the optical axis tends to produce an area of preferential bending so that forces will concentrate at the narrow portions of the support portions causing the lens to tend to vault posteriorly when it is compressed in the plane generally perpendicular to the optical axis.

Referring now to FIG. 9 there is shown another embodiment of the lens of the present invention. Lens 20' has similar haptics 24' and 26' which are substantially the same as haptics 24 and 26 of lens 20 shown in FIGS. 3 and 4 except that haptics 24' and 26' are aligned generally perpendicular to the plane of the optical axis rather than angled anteriorly.

FIG. 10 shows the lens 20 of the present invention implanted in contact with the ciliary sulcus rather than in bag 8.

Thus, it can be appreciated that the lens of the present invention when subjected to compression in the plane perpendicular to the optical axis will tend to vault posteriorly as the haptic collapses rather than tilting or decentering. I have designed a lens which although made of a very soft silicone type material or comparable materials such as hydrogel, this lens is capable of accommodating the normal distortions of the eye without transmitting that distortion to the very flexible optic. I have designed a lens which is very soft and flexible. The normal distortions of the eye are absorbed in a specially designed fenestration haptic support so that the optic may be left in its proper position within the eye and with only minimal distortions of the optic.

The present invention has been described in conjunction with preferred embodiments. Those skilled in the art will appreciate that many modifications and changes may be made to the preferred embodiments without departing from the present invention. It is therefore, not intended to limit the present invention except as set forth in the appended claims.

I claim:

1. An intraocular lens comprising:

an optic having a central light focusing portion and a surrounding peripheral portion said optic having an anterior surface, a posterior surface and an optical axis;

first and second fenestrated haptic support members extending from opposite peripheral portions of said optic for supporting said optic in position within the eye;

said fenestrations in each of said haptics defined by a member extending about the edge of said haptic said member having an arcuate outer peripheral surface and an arcuate inner peripheral surface and including:

an arcuate tissue contact portion remote from said optic and having first and second ends said arcuate tissue contact portion having a first radius of curvature;

a generally arcuate first beam portion extending from said first end of said tissue contact portion in a direction toward said optic;

a first support portion having an arcuate outer surface connecting said first beam portion to said periphery of said optic;

a generally arcuate second beam portion extending from said second end of said tissue contact portion toward said optic and substantially mirroring the arc of said first beam portion;

a second support portion having an arcuate outer surface connecting said second beam portion to said periphery of said optic at a point spaced circumferentially apart from the point where said first support portion is attached to said periphery of said optic;

the thickness of each of said first and second beam portions, measured in a direction generally parallel to said optical axis, increasing posteriorly as one moves from said tissue contact portion toward said optic;

the width of each of said beam portions, measured in a direction generally parallel of the plane of the fenestration in said haptic also increasing as one moves in a direction from said tissue contact portion toward said optic; and

the thickness of said tissue contact portion measured in a direction generally parallel to the optical axis being greater than the width of the tissue contact portion measured in a direction generally parallel to the plane of the fenestration in the haptic.

2. The intraocular lens of claim 1 wherein:

the width of each of said support portions, measured in the plane of said fenestration, narrows as one proceeds from said peripheral edge of said optic toward said beam portion; and

the thickness of each of said support portion, measured in a direction generally parallel to the optical axis, increases as one proceeds from said optic to said beam portion.

3. The intraocular lens of claim 1 wherein the curvature of said arcuate outer peripheral surface of each of said beam portions of said member is the same as the curvature of the arcuate outer peripheral surface of said support portions of said member.

4. The intraocular lens of claim 1 wherein the curvature of the arcuate inner peripheral surface of each of said beam portions of said member and the arcuate outer peripheral surface of each of said beam portions are the same but each emanates from a different center of curvature to provide the narrowing of the width of said beam portions, measured in the plane of the fenestration, as one proceeds in a directions away from the periphery of said optic toward said tissue contact portion.

5. An intraocular lens comprising:

an optic having a central light focusing portion and a surrounding peripheral portion and an optical axis; first and second fenestrated haptic support members extending from opposite peripheral portions of said optic;

each of said haptics having a generally arcuate outer perimeter including:

an arcuate tissue contact portion remote from said optic and having first and second ends said arcuate tissue contact portion having a first radius of curvature;

a generally arcuate first beam portion extending from said first end of said tissue contact portion in a direction toward said optic;