

The channels 38 eliminate the following pupillary blockage problem. Normally, aqueous fluid is produced by the ciliary body near the regions 17 and 24. This fluid must go through the pupil and come up into the canal of Schlem or the trabecular meshwork and out of the eye. An iridectomy normally is performed to permit such passage. However, the iridectomy may become plugged. Further, since the lens 10 is situated behind, but relatively close to the iris, it is possible that the iris could stick down against the front surface of the lens. In that event, no fluid passageway would remain, resulting in pupillary block. The channels 38 ensure a flow path to eliminate this problem.

It is anticipated that the lens 10 will be quite light in weight, typically less than about 5 mg in aqueous. It is conceivable that the lens could become dislodged and float free into the anterior chamber. In this rare event, or if the anterior chamber should flatten, it is desirable to minimize or eliminate contact with the endothelial cells on the cornea. To this end (FIG. 7), the front surface 11F of the optical region 11 may be provided with a few small projecting prongs 39, which may be pointed. Thus if the lens did migrate forward toward the cornea, instead of the entire lens surface rubbing the cornea and causing substantial or total damage to the endothelium, only the few points of the prongs 39 would touch the cornea. Endothelial cell destruction may be limited to the region of these points.

Although the present invention has been described in terms of a posterior chamber lens intended for implantation into the capsular fornix, the invention is not so limited. It may be possible, though not preferred, to mount the lens 10 with the centering hairs seated against the region 24 of the ciliary sulcus. In this manner, the lens 10 could be used even with intracapsular cataract extraction. Similarly, it may be possible to mount the same lens 10 with the centering hairs 12 disposed within the angle 21. In the latter two cases, the tension exerted by the hairs 12 on either the ciliary sulcus 24 or the angle 21 will be considerably less than the tension exerted in these regions by the known prior art lenses described hereinabove. This is due to the fact that the filaments 12 are individually very pliable. The centering effect comes from the simultaneous but slight resilient forces of all of the filaments, exerted over a relatively large area. Moreover, if implanted in the region of the ciliary sulcus, fibrosis may also occur (similar to the growth of the fibers 23) which will lock the lens 10 in place and eliminate the radial tension. Such use, wherein the lens is mounted in other than the capsular fornix, should be done only after verification by extensive research.

I claim:

1. An intraocular lens useful for implantation in the capsule of an eye after extracapsular extraction, comprising:
  - a lens body,
  - a plurality of pliant lens-centering filaments extending outwardly from edge portions of said lens body, the loci of the distal ends of said filaments being circular and having a diameter approximating that of said capsule, said filaments being insertable in the cleft of said capsule, the resilience of said filaments centering said lens body behind the pupil of said eye, and
  - a substantially annular ridge extending rearwardly from said lens body, said ridge seating against the posterior capsule when said lens is implanted in said capsule, a section of said ridge being missing to

permit the insertion of a discission instrument therethrough.

2. An intraocular lens according to claim 1 wherein said lens body is substantially plano-convex, said ridge extending from the planar face thereof.
3. An intraocular lens according to claim 1 wherein said edge portions each comprise a haptic section, said filaments extending from said haptic sections.
4. An intraocular lens according to claim 1 wherein said filaments are arranged in two groups projecting from diametrically opposed edge portions of said lens body.
5. An intraocular lens according to claim 1 wherein said filaments all are disposed in a common plane.
6. An intraocular lens according to claim 1 wherein each of said filaments has a rounded or knob-like free end.
7. An intraocular lens according to claim 1 having at least one fluid flow channel extending therethrough, and terminating in the central frontal region of said lens body.
8. An intraocular lens comprising:
  - a lens body,
  - a plurality of pliant lens-centering filaments extending outwardly from edge portions of said lens body, and
  - at least one small pointed prong projecting from the front surface of said lens body, said at least one prong limiting the potential contact between said lens and the cornea of an eye to the tip area of said at least one prong.
9. An intraocular lens intended for implantation within the human eye, comprising:
  - a body of transparent material, said body having a central optical region configured to provide requisite dioptic power,
  - at least two spaced sets of pliant hairs projecting generally radially outwardly from spaced rim sections of said body, said hairs all being substantially coplanar, said hairs being bendable in said plane to engage a peripheral region within said eye, the resiliency of said pliant hairs centering said optical region with respect to said eye peripheral region, and
  - an annular lip projecting rearwardly from the central optical region of said body, said lip seating against the posterior capsule when said lens is implanted in the capsule of an eye after extracapsular cataract extraction, said lip spacing said lens from said posterior capsule.
10. An intraocular lens according to claim 9 and having at least one opening in said lip, said opening and the space behind said lens body permitting the insertion therethrough of an instrument to perform a discission without dislodging said lens.
11. An intraocular lens according to claim 9 wherein each of said pliant hairs is loop or U-shaped.
12. A posterior chamber intraocular lens intended for implantation in the capsule of an eye after extracapsular cataract extraction, comprising:
  - a lens body,
  - centering means attached to said lens body for situating said lens in a central position within said capsule, and
  - a generally annular lip projecting rearwardly from the rear face of said lens body, said lip being adapted to contact the posterior capsule and to space said rear face away therefrom, there being an opening in said lip through which a discission instrument may be inserted without dislodging said lens.

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