

eye in accordance with the present invention will resist accidental dislocation, and shows good biocompatibility with the eye tissue.

Referring to FIGS. 6 and 7, a posterior chamber artificial intraocular lens assembly 46 which incorporates a pair of mounting strands 48 designed in accordance with the present invention, is disclosed as a preferred embodiment of the present invention. The second artificial intraocular lens assembly 46 is generally of the type described in U.S. Pat. No. 4,159,546. The specification of this patent is hereby expressly incorporated by reference.

Briefly, the second artificial lens assembly 46 is adapted for mounting a lightweight refracting lens body 22 within the posterior chamber 50 of the eye 30. The lens assembly 46 includes a pair of haptic mounting strands 48 which extend substantially laterally from the light refracting lens body 22 with a curved free standing end. The mounting strands 48 are manufactured from a biocompatible elastic material which lends spring like properties to the mounting strands 48. Polypropylene is very well suited for this purpose. Each of the mounting strands 48 of the second artificial lens assembly 46 incorporates, in accordance with the present invention, a surface 52 which is contoured for disposition in intimate contact with the base 54 of the iris 28 when the artificial lens assembly 46 is properly inserted within the eye 30. The surface 52 includes at least a plurality of apertures 54 adjacent the outer extremity of the lens support that are available for ingrowth of the tissue of the iris 28. The number and dimensions of the apertures 54 are substantially the same as is described above for the first preferred embodiment of the mounting loop 20 of the present invention.

As is shown on FIG. 7, the second artificial lens assembly 46 is surgically inserted in the posterior chamber 50 of the eye 30 so that the elastic mounting strands 48 resiliently support the light refracting lens body 22 behind the pupil and within the optical axis of the eye. It is desirable to insure that the initial surgical anchored position is to be maintained since the lens must be capable of functioning for a number of years. After the initial surgical placement of the lens assembly 46 has taken place, ingrowth of tissue of the iris 28 into the apertures 54 in the resilient haptic support further strongly anchors the artificial lens assembly 46 within the eye 30. Thus a lightweight lens assembly is provided that will not be substantially affected by sudden inertia movements of the patient's eye while still permitting the lens body 22 to be resiliently supported to facilitate both the initial implanting, e.g. the strands can collapse to enter through the pupil and subsequent centering of the optical lens body.

Referring to FIGS. 8 and 9, a third artificial lens assembly 56 which incorporates a third specific embodiment of the novel mounting loops 58 of the present invention, is disclosed. The third artificial lens assembly 56 is adapted for mounting a light refracting lens body 22 in the anterior chamber 41 of the eye 30. A pair of the mounting loops 58 are mounted below the light refracting lens body 22 in such a manner that the mounting loops 58 project away from the lens body 22 in an angular configuration. Stated in another way, geometrical planes respectively defined by each of the mounting loops 58 meet the plane of the lens body 22 at a slight acute angle, as is shown on FIGS. 8 and 9. Both loops 58 are conveniently manufactured from surgical grade polypropylene. A mounting stave 62 also made from

surgical grade polypropylene, projects laterally outwardly from the light refracting lens body 22. A small protrusion 64 is provided at a remote end 66 of the stave 62 so that the protrusion projects upwardly towards the cornea 68 of the eye 30. The protrusion 64 provides a continuous camming surface so that the stave 62 may be smoothly passed through the mounting loop 58 and upon release hooks the entire lens assembly 56 to the iris 58, as is shown on FIG. 9.

Each mounting loop 58, in accordance with the present invention, includes surfaces 70 contoured for disposition in intimate contact with the iris 28. Each of the surfaces 70 are provided with a plurality of circular apertures 72 which are available for natural ingrowth of the tissue of the iris 28. The number and dimensions of the apertures 72 are substantially identical with the dimensions and numbers of apertures 32 described for the first preferred embodiment of the mounting loop 20 of the present invention.

As it should be readily apparent from the above description and from an inspection of FIGS. 8 and 9, in order to mount the third artificial lens assembly 56 within the eye a surgical incision 74, shown on FIG. 9, is first made within the iris 28. Both loops 58 are simply inserted behind the iris and the stave 62 is led through the incision 74. The stave 62 is then bent sufficiently to engage a position below the mounting loop 58. When the stave 62 is released, the protrusion 64 at the remote end 66 of the stave 62 engages the mounting loop 58 so that the entire lens assembly 56 is fixedly attached to the iris 28. After this initial, surgical affixation the naturally occurring tissue ingrowth into the apertures 72 further anchors the lens assembly 56 to the eye 30.

It is to be emphasized that the description of the several specific embodiments of the present invention is intended to be exemplary rather than limiting in nature. Accordingly, they may be readily modified without departing from the scope and spirit of the present invention. What is critical for the purpose of the present invention is that at least one mounting appendage of an intraocular lens assembly is provided with a surface contoured for intimate juxtaposition to the iris 58 without irritation and contains a plurality of acceptable apertures which penetrate through the entire body of the mounting appendage. An artificial intraocular lens assembly constructed in accordance with the present invention is first affixed within the anterior or posterior chamber of the eye in accordance with the prior art. Subsequent to the initial surgical affixation, tissue ingrowth into the apertures strongly attaches the artificial intraocular lens assembly to the iris without any undue irritation of the iris. Since the hereinbefore described specific embodiments of the present invention readily lend themselves for further modifications by those skilled in ophthalmological surgery and in the ophthalmological lens design arts, the scope of the present invention should be interpreted solely from the following claims.

What is claimed is:

1. An intraocular lens assembly adapted for implantation into a living eye, the lens assembly comprising:
  - a light refracting lens body, and
  - a plurality of flexible strands extending substantially laterally from the lens body, each strand having a curved portion and forming a loop;
 the curved portion of said strand spaced furthest apart from said lens body including a flat portion, said flat portion including a number of pores there-