

Referring now to FIGS. 3-7 there will be described implantation of the intraocular lens within the eye in either the anterior chamber or posterior chamber. In these Figs. the lens body is convex-convex. When the lens is implanted in the anterior chamber (See FIG. 3), the vaulting 23C' of the lens places the optical lens body 21 anterior to the plane of the iris. The outward-convex portion 23D is fixated or seated in the area of the scleral spur similar to the technique used in other available anterior lens designs. If the lens is implanted in the posterior chamber of the eye (See FIGS. 5 and 6) the vaulting 23C' of the lens places the optical lens body 21 more posterior than the outward-convex portions 23D of the fixation loop members 23, thereby urging the lens body 21 against the posterior capsule. Implantation of the lens device in the posterior chamber can be done with the outward-convex portions 23D of the fixation loop members 23 being placed either in the ciliary sulcus (FIG. 5) or in the capsular bag (FIG. 6).

Any of the above techniques may be performed as a primary or secondary surgical procedure. Implantation of the intraocular lens in either the anterior or posterior chamber of the eye may be done after either extracapsular or intracapsular lens extraction.

Referring to FIG. 8, the vaulting provided by the step off of the fixation loop members 23 may be provided by a gradual sloping of the members 23 from their junction with the lens body 21, rather than a sharp step off. Referring to FIG. 9, small indentations 29 may be formed anywhere along the convex curve of outward-convex portions 23D to provide for easier manipulation of the loop members 23. Referring to FIG. 10, the loop members 23 may be arranged such that the elbows point in a counterclockwise direction rather than in a clockwise directions when viewing the lens from a given plan view. The holes 27 may vary in number and position on the lens body 21 or may be formed in the bases 23B of the loop members 23. The optical lens body 21 may be planar-convex (FIG. 1), or convex-convex (FIG. 11). In addition the intraocular lens may be formed of separate pieces of suitable plastic with the fixation loop members 23 formed separately from the lens body 21 and mechanically attached to the lens body 21.

I claim:

1. An intraocular insert suitable for use as an artificial lens implant in the anterior chamber or posterior chamber of a human eye, comprising:
  - a lens body having a peripheral edge portion defining a circle,
  - said lens body having first and second position fixation members extending from opposite sides of the periphery of said lens body,
  - each of said first and second position fixation members comprising an arm portion having a base joined to the periphery of said lens body with said arm portion extending from said lens body, an elbow, and an elongated outward-convex seating portion having a first end joined to said arm portion by said elbow and an opposite free end extending in a direction such that said elongated outward-convex seating portion is outward of said arm portion relative to said lens body,
  - the two bases of said arm portions of said first and second position fixation members being located on opposite sides of said lens body to allow a first plane coinciding with and passing through the axis of said lens body to pass through said two bases,

said arm portions of said first and second position fixation members extending from said lens body in opposite directions relative to each other, said two bases of said arm portions being further located on opposite sides of a second plane coinciding with and passing through the axis of said lens body, said second plane also passing through said arm portions and through said outward-convex seating portions,

each arm portion of each of said position fixation members crossing said second plane from its base and has its elbow including the inside edge of its elbow located on a side of said second plane opposite the side on which its base is located,

said elongated outward-convex seating portions extending from their elbows respectively in opposite directions relative to each other,

the curvature of the elbow of each of said position fixation members being much sharper than the curvature of its outward-convex seating portion, the distance between the elbow and the free end of each of said position fixation members being greater than the distance between its outward-convex seating portion and the nearest edge of said lens body,

each position fixation member being relatively small in cross-section and resilient such that its arm portion and elbow may be moved toward said lens body and its elongated outward-convex seating portion may be moved toward its arm portion and hence toward said lens body

each of said outward-convex seating portions providing a broad area of tissue contact and fixation when said insert is implanted in the eye.

2. The intraocular insert of claim 1, wherein:

each elongated outward-convex seating portion has a length greater than the radius of said circle of said lens body,

the curvature of each of said elongated outward-convex seating portions being relatively broad compared to the radius of curvature of said circle of said lens body.

3. The intraocular insert of claims 1 or 2, wherein: said insert is formed of a single piece of plastic material.

4. The intraocular insert of claims 1 or 2, wherein: each arm portion comprises a generally straight portion generally parallel to a line tangent to said lens body.

5. The intraocular insert of claims 1 or 2, wherein: each arm portion comprises a straight portion which defines an angle of about 90° relative to said first plane passing through the axis of said lens body and through said two bases of said first and second position fixation members.

6. The intraocular insert of claims 1 or 2, wherein: each elongated outward-convex seating portion has a single outward-convex seating curve.

7. The intraocular insert of claims 1 or 2, wherein: each arm portion has a major portion of its length located between its outward-convex portion and said lens body when seen from a plan view of said intraocular insert.

8. The intraocular insert of claims 1 or 2, wherein: each arm portion comprises a generally straight portion generally parallel to a line tangent to said lens body,