

121 and 122. Relative distances and locations of the guide grooves 13 to 16 correspond to those of the support legs 3 to 6 of the intraocular lens 1.

The lens glide plate 12, when used, is placed on the cornea 11. Then a fine cutter is fit to the guide grooves 13 to 16 and pierced through the cornea 11 into the peripheral site of the iris 8. Thus the desired small apertures 10 are formed at proper positions of the iris 8 (not illustrated in detail).

The use of the lens glide plate 12 also serves to prevent vitreous creeps over the intraocular lens 1 when the lens 1 is inserted in the chamber.

After the foregoing preparation, while the lens body 2 is inserted in the anterior chamber 7, the support legs 3 to 6 are inserted into the respective apertures 10 in the iris 8 until the engaging portions 13 to 16 at their distal ends go beyond the iris 8 and engagingly sit in the ciliary sulci 9. Thus the intraocular lens 1 is reliably fixed in the anterior chamber 7.

As apparent from the explanation made so far, the intraocular lens 1 according to the embodiment can be inserted very easily, and is reliably fixed in position by engagement of its support legs 3 to 6 with the ciliary sulci through fine bores or apertures 10 in the peripheral site of the iris 8, which may be so small that they do not disturb the motion of the iris. Therefore, this intraocular lens 1 removes the possibility of any trouble in the corneal endothelium after surgery.

The use of four support legs 3 to 6 in the above-described embodiment is more advantageous for preventing a rotational motion of the intraocular lens 1 in the anterior chamber 7 and to remove the possibility of damaging the iris 8 and the cornea 11 after surgery. However, substantially the same effect is expected also when the total number of support legs is three, namely, one support leg extending in the first direction (upward) and two legs extending in the second direction (downward), or vice versa.

As described above, the intraocular lens according to the invention is an anterior chamber lens for implantation in the anterior chamber, which needs neither the high skill required for conventional posterior chamber lenses for placement in the posterior chamber to suture them to ciliary sulci, nor expensive apparatus for removal of vitreous which was also required for conventional posterior chamber lenses. Moreover, unlike conventional anterior chamber lenses, the intraocular lens according to the invention does not cause any trouble in the cornea, even after long use after surgery, because of its reliable fixture in the anterior chamber by reliable and unharmed engagement of its support legs with ciliary sulci.

No need of removal of vitreous not only ensures safe implantation of the intraocular lens but also contributes to reducing the time required for surgery.

Moreover, unlike conventional anterior chamber lenses fixed by engagement of its support legs with the anterior chamber angle, the intraocular lens according to the invention is held in position by engagement of its support legs with ciliary sulci through fine bores or apertures made in a peripheral site of the iris where the desired motion of the iris is not disturbed. Therefore, the intraocular lens is held in a remarkably stable condition, and removes the possibility of damages to the iris and the corneal endothelium caused by rotation or other motional displacement of the lens after surgery.

In particular, when using four support legs with two pairs of legs extending in opposite directions, the intraocular lens is more reliably fixed in position.

The intraocular lens according to the invention has a relatively simple structure, although having support legs extending from the lens body, which is not unreasonably complex as compared to conventional intraocular lenses for placement in the anterior chamber. Therefore, it can be fabricated easily while ensuring a sufficient durability.

Although the invention has been shown and described with respect to preferred embodiments thereof, it should be understood by those skilled in the art that the foregoing and other changes and omissions in the form and detail thereof may be made therein without departing from the spirit and scope of the invention, which is to be limited and defined only as set forth in the following claims.

What is claimed is:

1. An intraocular lens to be implanted in an anterior chamber, comprising:

a lens body having an anterior side and a posterior side; and

elongated extensions extending from said lens body, which are long enough for their distal ends to engagingly sit in ciliary sulci and are curved concavely in a posterior direction with a curvature large enough for said lens body and part of said elongated extensions lying in the anterior chamber to be held offset from a plane of movement of an iris when said elongated extensions are inserted in and through fine apertures made in radially outer circumferential portions of the iris, each of said elongated extensions being bent radially outwardly at a distal end portion thereof and being bent rapidly inwardly immediately adjacent said distal end portion.

2. The intraocular lens according to claim 1, wherein the number of said elongated extensions are at least three, one or more of said elongated extensions extending in a first direction, and the other or others of said elongated extensions extending in a second direction opposite from said first direction.

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