

In a still further aspect of the present invention, the vision of an eye may be repaired by inserting intraocular lens 100 between the iris 20 and capsular bag 24. As shown in FIGS. 24 and 25, intraocular lens 100 is rolled up and inserted into the opening formed in the eye 22. Next, the lens is unrolled, with reinforcement ring 114 returning lens 110 to a planar configuration. Intraocular lens 100 is then positioned between iris 20 and capsular bag 24, thereby permitting correction of the vision of the eye 22. This specific procedure is particularly suited for correcting vision problems of the existing lens where replacement of the existing lens is not warranted, such as where the patient suffers from high myopia.

By virtue of the foregoing, there is thus provided an intraocular lens that may be fixated either to the periphery of the iris or to an opening in the capsular bag, and which does not cause damage to the structure of the eye.

While the present invention has been illustrated by description of different embodiments which have been described in considerable detail, it is not the intention of the Applicant to restrict or in any way limit the scope of the appended claims to such detail. Additional advantages will readily appear to those skilled in the art. Thus, the invention in its broadest aspects is not limited to the specific details, representative apparatuses and methods, and illustrative examples shown and described. Accordingly, departures may be made from the details without departing from the spirit or scope of Applicant's general inventive concept.

We claim:

1. An intraocular lens adapted to receive the periphery of the iris of an eye or an opening in the capsular bag of an eye comprising:

an annular ring having an outer upper flange, an outer lower flange, and an inner wall interconnecting said flanges, said flanges being spaced to receive therebetween the periphery of the iris or an opening in the capsular bag of an eye; and

a lens operatively interconnected to said inner wall, and wherein said lens is a thin membrane having a plurality of concentric circular grooves formed therein, said concentric rings forming a plurality of concentric annular prisms.

2. The intraocular lens of claim 1 wherein said annular ring and said lens are flexible.

3. The intraocular lens of claim 2 wherein said annular ring and said lens are manufactured from optically clear silicone.

4. The intraocular lens of claim further comprising a reinforcement ring attached to said annular ring to reduce the collapsibility of said intraocular lens, said reinforcement ring being manufactured from a material having a higher stiffness than the material from which said annular ring is manufactured.

5. The intraocular lens of claim 4 wherein said reinforcement ring is on said lower flange.

6. The intraocular lens of claim 4 wherein said reinforcement ring is made from teflon.

7. The intraocular lens of claim 4 wherein said reinforcement ring is made from polymethylmethacrylate.

8. The intraocular lens of claim 4 wherein said reinforcement ring is made from metal.

9. The intraocular lens of claim 1 wherein said upper flange and said lower flange have a radial dimension sufficient to accommodate expansion and contraction of the iris of the eye.

10. The intraocular lens of claim 9 further comprising a fixation member extending radially outwardly from said inner wall.

11. The intraocular lens of claim 1 wherein said annular ring has an outer diameter from about 3 millimeters to about 10 millimeters.

12. The intraocular lens of claim 10 wherein said annular ring has an outer diameter from about 5 millimeters to about 6 millimeters.

13. The intraocular lens of claim 1 wherein said lens has a diameter from about 2 millimeters to about 7 millimeters.

14. The intraocular lens of claim 11 wherein said lens has a diameter from about 3 millimeters to about 5 millimeters.

15. The intraocular lens of claim 1 wherein said lens has a diameter from about 14 millimeters to about 15 millimeters.

16. The intraocular lens of claim 1, said annular ring further including a plurality of channels extending therethrough to permit the free passage of intraocular fluid through said annular ring.

17. The intraocular lens of claim 1 wherein said perimeter of said circular lens is integrally formed with said inner wall by a plurality of circumferentially spaced apart tabs between said perimeter of said circular lens and said inner wall, said tabs forming a plurality of openings therebetween that permit the free passage of intraocular fluid therethrough.

18. The intraocular lens of claim 1 wherein said perimeter of said circular lens is integrally formed along the entire length thereof to said inner wall.

19. The intraocular lens of claim 1 wherein said flanges have differing radial dimensions.

20. An intraocular lens comprising:

an integral annular ring having an outer upper flange, an outer lower flange, and an inner wall interconnecting said flanges, said flanges being spaced to receive therebetween the periphery of the iris or an opening in the capsular bag of an eye;

a thin, optically clear membrane lens having a plurality of concentric circular grooves formed therein, said concentric circular grooves forming a plurality of annular prisms, said membrane lens having a perimeter formed with said inner wall; and

a reinforcement ring attached to said integral annular ring to maintain said lens in a planar orientation in use.

21. The intraocular lens of claim 20 wherein said membrane has a diameter from about 14 millimeters to about 15 millimeters.

22. An intraocular lens adapted to receive the periphery of the iris of an eye or an opening in the capsular bag of an eye comprising:

a substantially circular lens having a substantially U-shaped annular channel extending inwardly along the perimeter thereof, said channel being adapted to receive therein the periphery of the iris of an eye or an opening in the capsular bag of an eye and wherein said circular lens is a thin membrane having a plurality of concentric circular grooves formed therein, said concentric circular grooves forming a plurality of concentric annular prisms.

23. The intraocular lens of claim 22 wherein said circular lens is made from optically clear silicone.

24. The intraocular lens of claim 23 further including a reinforcement ring attached to said circular lens to reduce the collapsibility of said intraocular lens.

25. An intraocular lens adapted to receive the periphery of the iris of an eye or an opening in the capsular bag of an eye comprising:

a flexible annular ring having an outer upper flange, an outer lower flange, and an inner wall interconnecting