stretched by centrifugal tension from the ciliary body **14** through zonules **21** and capsular bag **16**, its curvature flattens and its optical power contribution drops to plus two (+2) diopters. Thus, when the patient views distant objects, the ciliary body **14** is relaxed, the zonules **21** are placed under tension, the capsular bag **16** is stretched, the lens **22** flattens, and the required +17 diopters results. On the other hand, when the patient views near objects, the ciliary body **14** constricts, the tension on zonules **21** is released, and the centripetal forces in the soft polymer portion **23** cause portion **23** to assume its "memory" shape, thereby increasing the contribution of portion **23** to +5 diopters, and the total power of the lens **22** to +20 diopters.

The soft polymer of the molded accommodating portion **23** must be such that the built-in centripetal force can be overcome by the centrifugal force or tension generated by the ciliary body **14**, zonules **21**, and capsular bag **16**, when the ciliary body **14** relaxes. A preferred material for portion **23** is silicone, although other known materials can also be used so long as they meet the required characteristics for IOL implants and are sufficiently soft to meet the force responsive requirement set forth in the foregoing.

In FIG. **5**, there is shown a second embodiment of the lens of the present invention, wherein the posterior portion of the lens is made adjustable. For simplicity, those parts of the lens **45** corresponding to like parts in the lens **22** of FIGS. **3**A and **3**B have been given the same reference numerals. As can be seen in FIG. **5**, lens **45** comprises an accommodating portion **23** and a posterior portion **24** of a fixed focus. On the posterior wall **46** of portion **24** there is attached, as by fusion or cement, an adjustable posterior portion **47** composed of a soft polymer such as silicone. An expansion channel **48** extends **360** degrees around the interior periphery of portion **47** in a manner similar to channel **28** in anterior portion **23**, and is connected to access port **29**, through valve means **32** and tube **49**, which is separate from tube **31**. Channel **48** is adapted to receive a visoelastic material which alters the shape, and hence, the focusing power of portion **47**. Thus, with the arrangement of FIG. **5**, the "fixed" power of the combination of portions **24** and **47**, i.e., the posterior portion of the lens may be adjusted before, during, or after implantation. The implantation of lens **45** within the capsular bag **16** is the same as for the lens **22** of FIGS. **3**A and **3**B.

From the foregoing it can be seen that the lens of the invention, when properly implanted, affords a desired amount of accommodation for the patient while also affording distance vision also. The lens, by being attached to the anterior wall of the capsular bag, undergoes changes in power in much the same way as the crystalline lens of the normal eye, and the forces acting on the lens are the same forces as are characteristic of a normal eye. With the arrangement, it is also possible to fine tune the focusing power of the lens to suit the patient's needs. In the implantation of the lens, very little invasion of the capsular bag is necessary, and possible damage of the ciliary body by direct connection thereto is avoided.

The foregoing has been for the purpose of illustrating the principles and features of the invention as embodied in preferred structures. Numerous changes or variations of structure may occur to workers in the art without departure from the spirit and scope of the invention.

I claim:

1. A lens implant for the eye, wherein the eye has a substantially intact capsulary bag having anterior and posterior walls and a capsulorexis opening with edges in said anterior wall, said implant comprising:

a first lens portion of a deformable material, said lens portion having a periphery and anterior and posterior surfaces;

affixing means on said lens portion adjacent said periphery for affixing said first said lens portion to the anterior wall of the capsular bag whereby forces on the anterior wall are transmitted to said lens portion;

said affixing means comprising a shelf on said lens portion adjacent the periphery thereof, said shelf being coated with a pigmented polymer gel having a fight absorption characteristic, said shelf being adapted to receive and underlie the inner surface of the anterior wall of the capsulary bag adjacent the opening therein.

2. A lens implant as claimed in claim **1**, wherein said first lens portion has an anterior periphery and an expansion channel extending around said interior periphery.

3. A lens implant as claimed in claim **2**, and further including access means for injection of material into said expansion channel from outside said first lens portion.

4. A lens implant as claimed in claim **1**, and further comprising a second lens portion affixed to said posterior surface of said first lens portion.

5. A lens implant as claimed in claim **4**, wherein said second lens portion has a fixed focal length.

6. A lens implant as claimed in claim **4**, wherein said second lens portion has a variable focal length.

7. A lens implant as claimed in claim **6**, in which said second lens portion has an interior periphery with an expansion channel extending around said interior periphery.

8. A lens implant as claimed in claim **7**, and further comprising access means for injection of material into said expansion channel from outside of said second lens portion.

9. A lens implant as claimed in claim **4**, wherein said second lens portion comprises a first member having a fixed focal length and a second member having a variable focal length.

10. A lens implant as claimed in claim **9**, in which said second member has an interior periphery with an expansion channel extending around said interior periphery.

11. A lens implant as claimed in claim **10**, and further comprising access means for injection of material into said expansion channel.

12. A lens implant for the eye, wherein the eye has a substantially intact capsulary bag having anterior and posterior walls and a capsulorexis opening with edges in said anterior wall, said implant comprising:

a first lens portion of a deformable material, said lens portion having a periphery and anterior and posterior surfaces;

affixing means on said lens portion adjacent said periphery for affixing said first lens portion to the anterior wall of the capsular bag whereby forces on the anterior wall are transmitted to said lens portion;

said affixing means comprising a flap on said lens portion adjacent the periphery thereof, said flap being adapted to overlie and contact the outer surface of the capsulary bag adjacent the opening therein, said flap being coated with a pigmented polymer gel having a light absorption characteristic.

13. A lens implant as claimed in claim **12**, wherein said first lens portion has an interior periphery with an expansion channel extending around said interior periphery.

14. A lens implant as claimed in claim **13**, and further including access means for injection of material into said expansion channel from outside said first lens portion.

15. A lens implant as claimed in claim **12**, and further comprising a second lens portion affixed to said posterior surface of said first lens portion.

16. A lens implant as claimed in claim **15**, wherein said second lens portion has a fixed focal length.