Implantation of the inventive lens **38** restores normal vision because, not only does the lens **38** replace the patients occluded natural lens, but the normal responses of the ciliary body **32** cooperate with the lens **38** during focusing. In FIG. **1**, the focal length between the posterior surface **44** of optic **40** and the fovea **26** is greater to permit viewing of nearby objects. The focal length is greater because the ciliary muscle or body **32** has contracted, making the capsule **22** more spheroid, permitting the lens **38** to be maintained in its resting state and positioning the optic **40** towards the anterior wall **58**. The lens **38** of the present construction thus follows the eye's natural physiology for focusing to provide a substitute means of optical accommodation. When the object of observation becomes more distant, the sensory cells within the retina **24** signal the ciliary body **32** to relax, thus pulling on the zonular fibers **34** to make the capsule more discoid as shown in FIG. **2**. In so doing, the horizontal depth of the capsule **22** is narrowed, which in turn causes the horizontal depth of the lens **38** to narrow in a similar manner. This narrowing causes the optic **40** to move posteriorly as the capsule **22** and the lens **38** become more discoid. The focal length between the posterior surface **44** of optic **40** and the fovea **26** is thus shortened, and the object remains in focus. If the object under observation reapproaches the eye, the ciliary body **32** again contracts, lessening the tension on the zonular fibers **34**. When this occurs, the lens **38** returns to its resting, non-deformed shape (as shown in FIGS. **1** and **4**), thus moving the optic **40** anteriorly. The focal length between the posterior surface **44** of the optic **40** and the fovea **26** is thus increased (see FIG. **1**), and the object remains in focus.

In view of the foregoing discussion, it will be appreciated that the inventive lens **38** is designed so as to provide a substantially uniform distribution of pressure along the walls of the capsule **22**. This was often not the case in prior art intraocular lenses. For example, FIG. **5** depicts one prior art lens **64** comprising an optic **66** and haptics **68***a,b*. The lens **64** is designed for placement within the natural capsule, with the haptics **68***a,b* providing a means for biasing the optic **66** anteriorly during focusing. However, due to the design of the lens **64**, the haptics **68***a,b* apply pressure along concentrated portions of the capsule, thus causing wear on the capsule. This problem is avoided with the lens of the invention.

FIGS. **6–13** depict alternate embodiments of the invention, with like numbering representing like parts. FIGS. **6** and **7** depict a lens **70** having a plurality of small, circular openings **72***a–d* formed at the optic perimeter **50**. Openings **72***a–d* serve a number of purposes. First, openings **72***a–d* provide an avenue by which antibiotics can be injected into the lens chamber **52**. Furthermore, the positioning of these openings **72***a–d* as depicted is such that the openings **72***a–d* overlap with the opening **62** (depicted in FIG. **1**) of the capsule so as to allow drainage of fluid from capsule **52** as well as continuous replenishment of fluids in lens chamber **52**. Finally, openings **72***a–d* can be used to assist in positioning the lens **70** within the capsule.

Although FIGS. **6** and **7** depict openings **72***a–d* along perimeter **50**, it will be appreciated that the location of these openings **72***a–d* can be altered. For example, one or more of these openings **72***a–d* can be located completely within the optic perimeter **50**, or completely outside the optic perimeter **50**, on the outer wall **48**.

FIGS. **8** and **9** depict yet another embodiment of the invention. In this embodiment, the lens **74** comprises longitudinal slots **76***a,b* which are formed within the outer wall **48** of the lens **74**. In the embodiment illustrated, the slots **76***a,b* have respective upper portions **78***a,b* which begin just beyond or outside the optic perimeter **50** (i.e., just beyond small segments **80***a,b* of outer wall **48**). The slots **76***a,b* progress around bight **51** and across the lens equator or bisecting plane **82**, to lower slot portions **84***a,b*. As shown in FIGS. **8** and **9**, the slots **76***a,b* do not communicate with opening **56**. That is, segments **86***a,b* of wall **48** separate slots **76***a,b* from opening **56**. Although two slots **76***a,b* have been illustrated, it will be appreciated that, in some applications, three or four of these slots may be desired, depending upon the rigidity needed for the lens **74**.

FIGS. **10** and **11** also depict an alternate embodiment of the inventive lens. In this embodiment, lens **88** comprises curved openings **90***a,b* formed in wall **48** anterior to plane **82**. FIGS. **12** and **13** depict a further embodiment wherein lens **92** comprises openings **94***a,b* formed in wall **48** posterior to plane **82**. In each of lenses **88**, **92**, the respective openings **90***a,b* and **94***a,b* are positioned opposite one another (i.e., their respective centers are about 180° apart) and are approximately the same size. However, it will be appreciated that the size, number of, and location of these openings can be altered as necessary depending upon, among otherthings, the strength or rigidity desired in the lens.

Although the invention has been described with reference to the preferred embodiment illustrated in the attached drawing figures, it is noted that equivalents may be employed and substitutions made herein without departing from the scope of the invention as recited in the claims. For example, while the foregoing method of inserting the lens **38** into the capsule **22** presumed that a portion of the anterior wall **58** of the capsule **22** would be removed with the natural lens, it will be appreciated that it may be possible to insert the lens **38** through an incision in the anterior wall **58**. Furthermore, while the foregoing description discloses that the lens **38** could be utilized in cataract patients, the lens **38** may be used in any situation where the natural lens needs to be replaced (e.g., in a patient who wishes to eliminate the need for bifocals).

Having thus described the preferred embodiment of the invention, what is claimed as new and desired to be protected by letters patent includes the following:

1. An accommodating intraocular lens for implantation substantially within the confines of the capsule of a human eye between the anterior and posterior capsule walls, said lens comprising:

an optic presenting an anterior surface and having an opening therethrough; and

a resilient optic positioning element coupled to the optic to cooperatively present a discoid shape that generally conforms to the shape of the capsule,

said optic positioning element presenting a posterior face that is configured for yieldable engagement with the posterior capsule wall, an anterior face that is generally flush with the anterior surface of the optic and configured for yieldable engagement with the anterior wall of the capsule, and a bight joining the anterior and posterior faces,

said optic positioning element being unitarily formed.

2. The lens of claim **1**, said optic presenting an outer perimeter defining a boundary between said optic and said optic positioning element, said optic opening overlapping said perimeter so that at least a portion of said optic opening is formed in said optic positioning element.

3. The lens of claim **1**, said optic presenting an outer perimeter, and said optic opening being entirely within said perimeter.

4. An accommodating intraocular lens for implantation substantially within the confines of the capsule of a human