cylindrical shape. Two examples of such non-circular cross-sectional shape are illustrated in FIGS. **18** and **19**, wherein the thickness of the haptic wall **191C** and **191D**, respectively, is non-uniform about the hollow haptic members **170C** and **170D**, respectively. Such non-uniform wall thickness is created by the provision of internal discontinuities **192C** and **192D**, respectively, which serve to substantially prevent total closing off of the fluid flow paths in the event of collapse of all or a portion of the hollow haptic member during ciliary contraction.

In addition, since the compression, deformation or kinking of the hollow haptic members **170B** must be capable of being accomplished merely by the force of ciliary muscle contraction, it also may be desirable to provide ribs or other discontinuities **193** on the external periphery of the hollow accommodating haptic members **170B**. Also, a suitable means for introducing fluid into the hollow haptic members **170B** and thus the fluid-filled chamber **156B** should also be provided, such as the fill port **195** shown for purposes of illustration in FIGS. **14** and **16**.

FIGS. **20** through **24** illustrate still another embodiment of the present invention, wherein the IOL **248** is equipped with a fluid-filled hollow ring or conduit **270B** surrounding the lens portion of the IOL **248**. The circular conduit **270B** functions in a manner generally similar to that described above in connection with FIGS. **14** through **19**, and has its interior chamber **290** in fluid communication with the fluid-filled chamber **256** by way of one or more interconnecting hollow ducts **294**.

As shown in FIG. **21**, the contraction of the muscle fibers (shown diagrammatically at reference numeral **221**) causes an inwardly-directed force on the conduit **270B**. This force compresses or deforms the conduit **270B** to force fluid from the conduit **270B**, through the interconnecting ducts **294**, and into the fluid-filled chamber **256**. When the muscle fibers **221** relax, the conduit **270B** returns to its relatively relaxed and undeformed condition, thereby allowing the fluid pressure in the fluid-filled chamber **256** to be relieved, similar to the function described above in connection with the previously-mentioned embodiments of the present invention. Also, like the hollow accommodating haptic members **170B** shown in FIGS. **14** through **19**, the conduit **270B** also serves the function of supporting the IOL **248** in the eye, and thus acts as a haptic member.

Although the interconnecting ducts **294** are shown as extending in generally radial directions and interconnected with the lens portion of the IOL **248** in a generally straight-on relationship therewith, it may be found to be desirable to form the ducts **294** in a "swept" or arcuate configuration, having a more "tangential" interconnection with the lens portion of the IOL **248**, similar to that shown for purposes of illustration in FIG. **22**.

Also, as was mentioned above in connection with the embodiment depicted in FIGS. **14** through **19**, the conduit **270B** can be desirably equipped with ribs or other discontinuities **293** in order to facilitate the proper compression and expansion in response to ciliary body muscle movement. In this regard, it should be noted that at least a portion of the ribs or other discontinuities **293** can be in the form of a circumferentially collapsable and expandable portion of the conduit **270B**, as shown in FIG. **24**. Such an arrangement allows the circumference of the conduit **270B** to be adjustably increased or decreased in order to fit a variety of eye sizes. This is especially advantageous since the conduit **270B** also serves the above-mentioned haptic function of holding and supporting the IOL **248** in the eye.

Finally, as illustrated in FIG. **23**, one or more interconnecting members **296**, which need not be hollow, can be provided to support the conduit **270B** in its spaced-apart relationship with the lens portion of the IOL **248**. Such non-hollow interconnecting members **296** (if included) function merely to aid in maintaining the lens portion of the IOL **248** in its proper position after implantation in the eye.

The foregoing discussion discloses and describes exemplary embodiments of the present invention. One skilled in the art will readily recognize from such discussion, and from the accompanying drawings and claims, that various changes, modifications and variations can be made therein without departing from the spirit and scope of the invention as defined in the following claims.

We claim:

**1**. An intraocular apparatus for implantation in an eye, said apparatus comprising:

a lens assembly including inner and outer light-transmissive lens members defining a fluid-filled chamber located between said lens members, at least a portion of said outer lens member being flexible; and

accommodation means for changing the shape of said chamber in response to muscle movement in the eye in order to change the overall refractive characteristics of said lens assembly, said accommodation means including fluid means for selectively changing the fluid pressure in said fluid-filled chamber in order to change the position of said outer lens member relative to said inner lens member.

**2**. An intraocular apparatus according to claim **1**, wherein said fluid means includes a flexible fluid-filled bladder, said chamber being in fluid communication with said fluid-filled chamber, said bladder being sized for contact with muscles in the eye and being contractable and expandable in response to said eye muscle movement in order to respectively force fluid into, and withdraw fluid out of, said chamber in order to cause a change in the position of said outer lens member relative to said inner lens member in response to said eye muscle movement.

**3**. An intraocular lens apparatus adapted to be implanted in the eye, said apparatus comprising:

a transparent and flexible outer lens membrane;

a transparent and relatively rigid inner support lens member located adjacent said flexible membrane, said flexible lens membrane and said support lens member being spaced apart and sealed to one another and defining a fluid chamber therebetween; and

accommodation means for injecting a pressurized fluid into said fluid chamber between said outer lens membrane and said inner support lens member in response to eye muscle movement in order to resiliently deform said flexible outer lens membrane and thereby change the refractive characteristic of said intraocular lens apparatus.

**4**. An intraocular lens apparatus according to claim **3**, wherein said accommodation means includes at least one fluid-filled inflatable accommodation bladder in fluid communication with said fluid chamber, said accommodation bladder being selectively contractable and expandable in response to eye muscle movement in