FIG. 1, and one end of the base 2*a* is slightly protruded outside of the other side of the reinforcing section 1*a*.

The tail 2*c* of the support 2 has a spring function of a certain spring force which permits easy deformation of the tail by external force. The portion remote to the base 2*a* is bent to form a bulged arc as shown in FIG. 1. The ends of the tails 2*c* are symmetrically disposed with regard to the center of the optical part 1.

The optical part 1 is made of a transparent elastic material such as a polyurethane elastomer, a silicone elastomer, a hydrogel polymer, a collagen compound, etc. The support 2 is made of a flexible synthetic resin such as polyimide.

The deformable intraocular lens of the above described first embodiment is transplanted in the eye with a suitable device such as an inserting device similar to that shown in Japanese Patent Application No. H3B-142067 (Japanese Patent Application Laid-open (kokai) No. H5-103803), by inserting it in place of the natural lens which has been extracted through a small incision of about 4 mm, and allowing it to restore to the original shape before it is deformed according to the memory characteristics of the optical part 1.

In the intraocular lens of the first embodiment, the anchor 2*b* and the substantial part of the base 2*a* of the support 2 are embedded in the optical part 1, and the thin and flexible tail 2*c* provided in the support 2 is connected to the wide and rigid base 2*a*, with the connection part being disposed outside the optical part 1. Therefore, even when compression stress shown by arrow F in FIG. 1 is imposed on the tail 2*c*, the compression stress is absorbed by the tail 2*c* as it bends in the direction shown by arrows f. The compression stress imposed on the tail 2*c*, therefore, is not transmitted to the rigid base 2*a*, and the deformable optical part 1 is free from strains or deformation. Accordingly, even when compression stress is imposed on the tail 2*c*, the optical part 1 does not deviate.

Although the above description, for convenience, refers to the situation where compression stress is imposed on the tail 2*c* of the support 2, the same effect can be obtained when the tails 2*c* undergo external force such as tensile, etc. That is, the stress is not transmitted to the bases 2*a*. Therefore, deviation of the optical part 1, or strains or deformation in the optical part 1 does not occur.

A second embodiment of the present invention will be described while referring to FIG. 3.

In FIG. 3, numeral 1 denotes an optical part, and numeral 2 denotes a support. The support 2 has a notch 2*d* at the position at which the base 2*a* is connected to the tail 2*c*, and the V-shape opening faces the inner area which is embraced by the tail 2*c*. In this embodiment, the width of the tail 2*c* is equal to that of the base 2*a*. The structure other than described is the same as that mentioned in the first embodiment. The same numbers in FIGS. 1 to 3 indicate the same or the corresponding parts.

The intraocular lens according to the second embodiment of the invention is used, same as the lens in the first embodiment, by inserting it in the eye with an inserting device in place of a natural lens which has been extracted from a small incision. When the tail 2*c* undergoes external force such as compression or tensile force, it bends to absorb the stress due to the presence of the notch 2*d* provided at the transition position between the tail 2*c* and the base 2*a* of the support 2. Accordingly, neither deviation of the optical part 1, nor strains or deformation in the optical part 1 occur as in the first embodiment.

In the present invention, the tail of the support may be formed thinner than the base 2*a* as in the first embodiment, and the transition position between them may be provided with a notch as in the second embodiment.

As described above, since the deformable intraocular lens according to the present invention has a structure which comprises an optical part which is made of an elastic material having predetermined memory characteristics and a plurality of supports which are made of a material different from that of the optical part and which are bonded to the optical part, each of the supports having, in a serial integration, a flexible tail, a rigid base which cuts off the transmission of stress generated by the deformation of the tail to the optical part, and an anchor which binds the support to the optical part, wherein the transitional part of the tail and the base is disposed outside the optical part, the intraocular lens of the present invention has the following advantage.

That is, the deformable intraocular lens according to the present invention does not cause deviation of the optical part and is free from strains or deformation of the optical part, because the stress is not transmitted to the optical part due to such a structure that the stress generated in the supports as a result of external force such as compression, tensile, etc., imposed on the supports when the supports hold the deformable optical part, is absorbed by the flexible tails of the supports and prevents the mentioned stress from being transmitted to the rigid bases. Since the tail and the base of each support are connected with each other outside of the optional part, the stress is not transmitted to the optical part. Therefore, the optical part does neither deviate within the eye nor generate strains or deformation.

What is claimed is:

1. A deformable intraocular lens having predetermined memory characteristics, the lens comprising:

(a) an optical part, the optical part having a central portion and a peripheral portion; and

(b) a plurality of supports, each support comprising a tail, a rigid base, and an anchor, the base being thicker than the tail, the base having a proximal end and a distal end, the distal end being farther than the proximal end from the central portion of the optical part, the distal end being integrally connected to the tail at a connection part, the proximal end being connected to the anchor, the anchor being integrally connected to the optical part, the distal end of the base protruding from the peripheral portion of the optical part, the connection part being disposed outside of the peripheral portion of the optical part, each support being associated with a corresponding reinforcing section, each reinforcing section protruding from the peripheral portion of the optical part, and the distal end of the base protruding from the reinforcing section.

2. A deformable intraocular lens as claimed in claim 1, wherein: the reinforcing section protrudes to form an angle of approximately 90 degrees.

3. A deformable intraocular lens as claimed in claim 1, wherein: the optical part is made of an elastic material; and each support is made of a material different than the elastic material.

4. A deformable intraocular lens as claimed in claim 1, wherein each support is made of a flexible synthetic resin.

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