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Skottun

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[54] **ACCOMMODATING INTRAOCULAR LENS**

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[58] Field of Search **623/4, 5, 6**

Action Part 1. Ophthalmic Surgery, 1990, vol. 21 No. 2, pp. 128-133.

Hara, T. et al. Accommodative Intraocular lens with Spring Action Part 2. Ophthalmic Surgery, vol. 23, No. 9, pp. 632-635.

Primary Examiner—Randy C. Shay

[57] **ABSTRACT**

An intraocular lens for implantation in the posterior chamber of human eyes. The lens has the ability to change its power in response to tension in the ciliary muscle of the eye. A medium of less refractive power than the surrounding aqueous is contained between two transparent membranes (10). By making at least one of these membranes (10) have a concave shape, a lens with positive power is created. By fashioning at least one of the transparent membranes from a resilient material it is possible to make the lens have the ability to alter its power. Change in lens power is accomplished by manipulating the pressure in the interior of the lens. The pressure can be varied by varying the volume of the lens. By means of haptics which either displace part of the side wall of the lens or change the separation between the front and back surface of the lens in response to changes in tension in the ciliary muscle, the volume can be changed. Since the lens chamber (22) is sealed off from the surrounding medium the change in volume results in a change in pressure. Change in pressure causes the flexible lens membranes to change shape thereby changing lens power.

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15 Claims, 9 Drawing Sheets

