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(54) **INTRA-OCULAR DEVICE**

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(57) **ABSTRACT**

An intra-ocular device includes an electronic lens that can be controlled to control the overall optical power of the device. The device can be installed within a flexible polymeric material shaped to conform to the inside surface of a lens capsule of an eye. Accommodation forces applied to the device and/or polymeric material via the lens capsule can cause a change in the optical power of the device and/or polymeric material. Further, such accommodation forces can be detected by an accommodation sensor of the device and the optical power of the electronic lens can be controlled based on the detected accommodation forces. Operated in this way, the device and polymeric material can restore a degree of accommodation to the eye that is related to existing mechanisms for controlling such accommodation, i.e., forces exerted by the eye via the lens capsule.