

- [54] "ENVELOPE" APPARATUS FOR INSERTING INTRA-OCULAR LENS INTO THE EYE
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[57] **ABSTRACT**

There is disclosed herein an apparatus and method for

curling and confining a flexible lens and for inserting and injecting the lens into the eye. The apparatus includes an insertion cartridge including a delivery envelope having a lens holder essentially in the form of an envelope or like a flower petal, a constricting sheath which is slid relative to the envelope to cause the envelope to curl within the tip of the sheath and thereby curl and confine a lens disposed in the envelope, and a reentry barrier operating in conjunction with both the envelope and the sheath for facilitating injection and delivery of the lens into the eye and for enabling retraction of the envelope into the sheath. The tip of the envelope is configured somewhat like a flower petal to enable the lens to be curled as the sheath is moved over the envelope, and to allow the delivery envelope to "flower out" and the lens uncurl as the envelope is pushed from the sheath. There also is disclosed a hand held pen to which the insertion cartridge is attached for manipulation during the surgical procedure, and a control unit and control system for controlling advancement of the lens out of the lens cartridge as well as retraction of the envelope. Also disclosed is a lens cartridge loader and package for the lens cartridge and lens.

7 Claims, 9 Drawing Sheets

