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[54] APPARATUS AND METHOD FOR CURLING AND INSERTING FLEXIBLE INTRAOCULAR LENSES

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[52] **U.S. Cl.** **606/107**; 128/898; 623/6

[58] **Field of Search** 606/1, 107; 623/4, 6; 128/898

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,681,102	7/1987	Bartell	606/107
4,763,650	8/1988	Hauser	606/107
4,765,329	8/1988	Cumming et al.	606/107
4,834,094	5/1989	Patton et al.	606/107
4,836,201	6/1989	Patton et al. .	
4,852,566	8/1989	Callahan et al.	606/107
4,862,885	9/1989	Cumming	606/107
4,919,130	4/1990	Stoy et al.	606/107
4,934,363	6/1990	Smith et al.	606/107
5,066,297	11/1991	Cumming	606/107
5,098,439	3/1992	Hill et al.	606/107
5,100,410	3/1992	Dulebohn	606/107
5,190,553	3/1993	Kanert et al.	606/107

OTHER PUBLICATIONS

"Consultation Section" edited by Samuel Masket, M.D., published in J Cataract Refract Surg—vol. 18, Mar. 1992, pp. 206-214.

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[57] **ABSTRACT**

An apparatus and method for folding or curling a flexible lens and for inserting the lens into an eye. The apparatus includes a loading and folding head having a slidable tubular member for curling the lens by constricting a loading chamber within the head, a cannula for entering the eye, and a body housing a plunger for advancing the curled lens out of the loading and folding head and through the cannula. The tubular lens-curling member is configured to enable the lens to curl gently in cooperation with a retaining lip on a wall of the loading chamber, in one smooth, simple and continuous motion.

11 Claims, 2 Drawing Sheets