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[54] SMALL INCISION INTRAOCULAR LENS INSERTION APPARATUS

4,834,094	5/1989	Patton et al.	
4,836,201	6/1989	Patton et al.	
4,880,000	11/1989	Holmes et al.	
4,919,130	4/1990	Stoy et al.	606/107
4,934,363	6/1990	Smith et al.	606/107

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FOREIGN PATENT DOCUMENTS

0363213	4/1990	European Pat. Off.
WO8910729	11/1989	PCT Int'l Appl.

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[58] Field of Search 606/107; 623/4,6

[57] ABSTRACT

An apparatus for inserting a foldable lens into an eye through an incision in the eye comprising: a paddle permanently affixed to the apparatus, and sized and adapted to contact the lens in the unfolded state; an elongated tube including a distally open interior space sized and adapted to receive the paddle in contact with the lens in the folded state, and a distal end portion sized and adapted to be inserted into the eye through the incision, the tube being cooperable with the paddle to fold the lens into the folded state as the lens in contact with the paddle is received through the distal opening into the interior space; and a mechanism to provide relative movement between the paddle and the tube.

[56] References Cited

U.S. PATENT DOCUMENTS

4,190,049	2/1980	Hager et al.
4,527,294	7/1985	Heslin
4,619,657	10/1986	Keates et al.
4,681,102	7/1987	Bartell
4,699,140	10/1987	Holmes et al.
4,715,373	12/1987	Mazzocco et al.
4,732,150	3/1988	Keener, Jr.
4,747,404	5/1988	Jampel et al.
4,759,359	7/1988	Willis et al.
4,763,650	8/1988	Hauser
4,765,329	8/1988	Cumming et al.
4,769,034	9/1988	Poley
4,781,719	11/1988	Kelman
4,785,810	11/1988	Baccala et al.

15 Claims, 4 Drawing Sheets

