US005578081A

United States Patent [19]

McDonald

[11] Patent Number: 5,578,081

[45] Date of Patent: Nov. 26, 1996

[54] **EYE MUSCLE RESPONSIVE ARTIFICIAL LENS UNIT**

[75] Inventor: **Henry H. McDonald**, 65 N. Madison, Suite 305, Pasadena, Calif. 91101

[73] Assignees: **Henry H. McDonald; William W. Haefliger**, both of Pasadena, Calif.; a part interest

[21] Appl. No.: **544,976**

[22] Filed: **Oct. 30, 1995**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 423,216, Apr. 17, 1995, which is a continuation of Ser. No. 103,573, Aug. 9, 1993, abandoned, which is a continuation-in-part of Ser. No. 43,009, Apr. 5, 1993, Pat. No. 5,425,759, which is a continuation of Ser. No. 807,204, Dec. 16, 1991, Pat. No. 5,203,790, which is a continuation-in-part of Ser. No. 791, 002, Nov. 12, 1991, Pat. No. 5,203,789.

[51] **Int. Cl.**[6] **A61F 2/16**

[52] **U.S. Cl.** **623/6**

[58] **Field of Search** 623/6

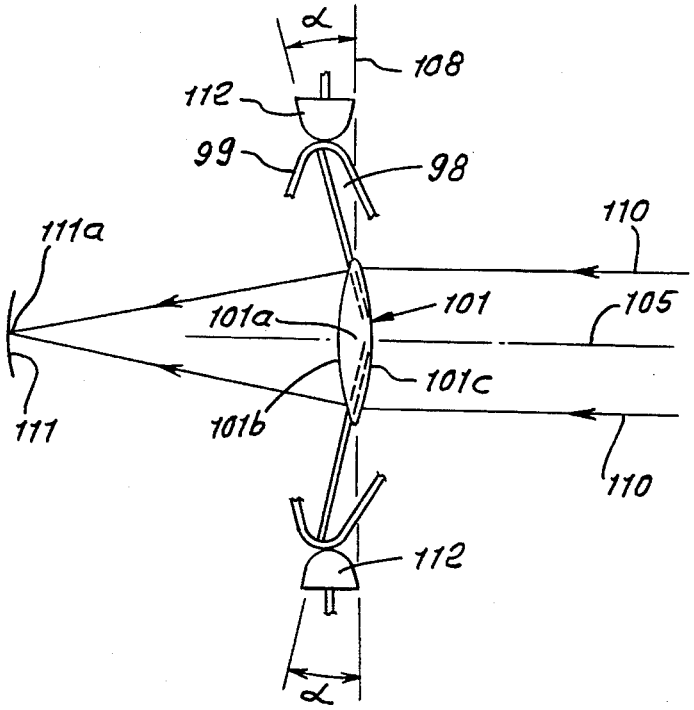
[56] **References Cited**

U.S. PATENT DOCUMENTS

4,198,714	4/1980	Jensen	623/6
4,414,694	11/1983	Choyce	623/6
4,441,217	4/1984	Cozean, Jr.	623/6
4,573,998	3/1986	Mazzocco	623/6
4,605,409	8/1986	Kelman	623/6
4,731,078	3/1988	Stoy et al.	623/6
4,769,035	9/1988	Kelman	623/6
4,786,445	11/1988	Portnoy et al.	623/6
4,790,846	12/1988	Christ et al.	623/6
4,813,957	3/1989	McDonald	623/6
4,833,890	5/1989	Kelman	623/6
4,834,751	5/1989	Knight et al.	623/6
4,840,627	6/1989	Blumenthal	623/6
4,842,602	6/1989	Nguyen	623/6
4,880,426	11/1989	Ting et al.	623/6
4,888,013	12/1989	Ting et al.	623/6
4,888,014	12/1989	Nguyen	623/6
4,894,062	1/1990	Knight et al.	623/6
4,932,970	6/1990	Portney	623/6
4,938,767	7/1990	Ting et al.	623/6
4,957,505	9/1990	McDonald	623/6
4,959,070	9/1990	McDonald	623/6
4,978,354	12/1900	Van Gent	623/6
5,030,231	7/1991	Portney	623/6
5,044,743	9/1991	Ting	623/6
5,203,789	4/1993	McDonald	623/6
5,203,790	4/1993	McDonald	623/6
5,217,464	6/1993	McDonald	606/107
5,395,378	3/1995	McDonald	623/6
5,476,514	12/1995	Cumming	623/6

Primary Examiner—Randy C. Shay
Attorney, Agent, or Firm—William W. Haefliger

[57] **ABSTRACT**

An artificial lens unit insertable into a capsular eye lens zone from which a natural lens has been removed, comprising the lens having a light refracting optical portion defining an axis, and consisting of plastic; the unit including haptics for positioning the lens in the capsular zone, the haptics extending at angles relative to a plane normal to the axis and passing through the lens; and the haptics' angles characterized in that the lens is displaced in the direction of the axis by the haptics in response to eye muscle constriction of the periphery of the capsular zone toward the axis.

15 Claims, 4 Drawing Sheets