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Anvar et al.

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(54) **FLUID FOR ACCOMMODATING INTRAOCULAR LENSES**

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(58) **Field of Classification Search**

USPC 623/6.56, 6.37, 6.22, 6.13

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,111,995	A		9/1978	Nelson
4,253,199	A		3/1981	Banko
4,254,509	A		3/1981	Tennant
4,304,895	A		12/1981	Loshaek
4,373,218	A		2/1983	Schachar
4,409,691	A		10/1983	Levy
4,423,809	A		1/1984	Mazzocco
4,435,856	A		3/1984	L'Esperance
4,466,705	A		8/1984	Michelson
4,490,860	A		1/1985	Rainin
4,494,254	A		1/1985	Lopez
4,512,040	A		4/1985	McClure
4,528,311	A		7/1985	Beard et al.
4,575,373	A		3/1986	Johnson
4,585,457	A		4/1986	Kalb
4,604,295	A		8/1986	Humphreys
4,615,701	A		10/1986	Woods
4,620,954	A		11/1986	Singer et al.
4,685,921	A		8/1987	Peyman
4,685,922	A		8/1987	Peyman
4,693,717	A		9/1987	Michelson
4,720,286	A		1/1988	Bailey et al.
4,731,078	A		3/1988	Stoy et al.
4,731,079	A		3/1988	Stoy
4,731,080	A		3/1988	Galin
4,764,423	A	*	8/1988	Yamaguchi et al. 428/843.4
4,784,485	A		11/1988	Ho
4,787,903	A		11/1988	Grendahl
4,790,847	A		12/1988	Woods
4,813,956	A		3/1989	Gupta
4,816,031	A		3/1989	Pfoff
4,836,201	A		6/1989	Patton et al.
4,842,601	A		6/1989	Smith
4,848,343	A		7/1989	Wallsten et al.
4,888,012	A		12/1989	Horn et al.
4,892,543	A		1/1990	Turley
4,902,293	A		2/1990	Feaster
4,919,151	A		4/1990	Grubbs et al.
4,932,966	A		6/1990	Christie et al.
4,946,469	A		8/1990	Sarfarazi
4,950,289	A		8/1990	Krasner
4,963,148	A		10/1990	Sulc et al.
4,994,082	A		2/1991	Richards et al.
4,995,879	A		2/1991	Dougherty
4,995,880	A		2/1991	Galib
5,015,254	A		5/1991	Greite
5,035,710	A		7/1991	Nakada et al.
5,047,051	A		9/1991	Cumming
5,061,914	A		10/1991	Busch et al.
5,066,301	A		11/1991	Wiley
5,078,740	A		1/1992	Walman
5,145,884	A		9/1992	Yamamoto et al.
5,145,935	A		9/1992	Hayashi
5,152,789	A		10/1992	Willis

(Continued)

FOREIGN PATENT DOCUMENTS

CN	101277659	A	10/2008
DE	102010010430	A1	9/2011

(Continued)

OTHER PUBLICATIONS

Scholl et al.; U.S. Appl. No. 13/193,487 entitled "Accommodating Intraocular Lenses," filed Jul. 28, 2011.

(Continued)

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(57) **ABSTRACT**

Fluids incorporated into intraocular lenses and their methods of use. In some embodiments the fluids are silicone oils, and in some embodiments they are used in accommodating intraocular lenses.

19 Claims, No Drawings