



[54] EYE ACTUATED SLEEP PREVENTION DEVICES AND OTHER EYE CONTROLLED DEVICES

4,967,186	10/1990	Ludmirsky et al.	340/575
5,057,834	10/1991	Nordstrom	340/963
5,360,971	11/1994	Kaufman et al.	250/221
5,402,109	3/1995	Mannik	340/575

[76] Inventor: Kallis Hans Mannik, K.H. Mannik P.O. Box 43, Webster, N.Y. 14580

Primary Examiner—Jeffery Hofsass Assistant Examiner—Benjamin C. Lee

[21] Appl. No.: 559,652

[57] ABSTRACT

[22] Filed: Nov. 20, 1995

This invention is an eyeglass attachable device for automobile and truck drivers for an alertness alarm signal and for related applications, like controlling the steering wheel movements of a vehicle, a car, a truck or a motorized wheelchair, by means of blinking of the the eyes.

[51] Int. Cl.⁶ G08B 23/00

[52] U.S. Cl. 340/575; 340/576; 340/825.19; 128/745; 250/221

[58] Field of Search 340/575, 576, 340/825.19; 351/210; 250/221; 128/745; 180/272; 364/569

[56] References Cited

U.S. PATENT DOCUMENTS

3,781,802	12/1973	Kafafian	340/825.19
3,798,599	3/1974	Kafafian	340/825.19
3,953,831	4/1976	Estrada	340/575
4,081,623	3/1978	Vogelely	379/354
4,144,531	3/1979	Anbergen	340/575
4,196,412	4/1980	Sluis et al.	340/575
4,397,531	8/1983	Lees	340/575
4,875,030	10/1989	Chiu	340/575
4,953,111	8/1990	Yamamoto et al.	364/569

This eyeglass attachable alarm signal device prevents automobile and truck drivers from falling asleep, while driving. A beam of a narrow band infrared light or a beam of ultrasound is used for sensing, whether the driver's eyelids are closed or are in an open position. A tiny adjustable infrared light emitter carrier, sliding along one of the eyeglasses temples is used for positioning the light emitter on the eyeglasses temple properly for each driver. This positioning can be done also automatically, by means of using a servomotor or electronically, by selecting and switching on continuously just the right beam, which is passing in close proximity of the eyeball.

18 Claims, 27 Drawing Sheets

