

United States

Welsh

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- [54] SPECTACLE LENS FOR APHAKIA PATIENTS
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- [73] Assignee: Phillip M. Frieder, Miami, Fla. ; a part interest
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- [58] Field of Search 351/167, 176; 350/189, 350/192

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[57] ABSTRACT

A spectacle lens having an anterior surface curvature, the anterior surface having a spherically shaped central vision surface area from 12 to 16 diopters and a peripheral, aspherical surface area surrounding the center vision spherical area, the aspherical surface area formed with a uniform diopter gradient varying from the central vision surface area edge to the outer circumference of the lens. The aspherical diopter rate of change, approximately one-third diopter per millimeter which is reduced from the spherical area toward the outer lens circumference, improves the peripheral vision of a person having aphakia when looking through the central vision portion, while eliminating the pin cushion effect found in conventional lenses which result from over-powering in the outer areas of the lens. The lens is useful for improving the vision of one having aphakia when looking through the central vision area and teaching the patient to rotate his head rather than his eyes to more clearly observe objects by re-establishing a new center vision point.

[56] References Cited

U.S. PATENT DOCUMENTS

2,096,524	10/1937	Martin	350/189
3,169,247	2/1965	Davis et al.	351/167
3,781,097	12/1973	Bechtold	351/167

OTHER PUBLICATIONS

Welsh, Postoperative Cataract Spectacle Lenses Textbook, published in 1961, cover and pp. 6, 26E, 26F, 37C, 37D, 93B and 93C.

9 Claims, 2 Drawing Figures

