instead of the vertical axis. This is also for the purpose of assisting the user in the adaptation process.

FIG. **16** illustrates two lenses **170** and **172** which represent the lenses to be used in the right and left eyes, respectively, of a user. In this embodiment, the lens elements **174***a*–**174***f* for the left eye have powers respectively corresponding to the powers of lens elements **176***a*–**176***f* for the right eye. This too, is to facilitate the adaptation process.

MODE OF OPERATION

Reduction of the cost of the lenses would have the effect of increasing the availability of this procedure to those who currently lack the economic means to afford such an operation. This is particularly the case in third world countries where costs are often the overriding consideration in medical care.

There is no question that the technique of using less than the entire retina is usually not as desirable as a system which duplicates the normal lens use of the entire retina. There is a loss of acuity which shows up in reduced resolution and contrast, particularly in low light conditions. In addition, the accommodation of the brain to such a system takes a period of time, and the degree of success in such accommodation varies with individuals. These are, of course, minor problems when taken in view of the alternative, which is blindness.

In the case where a defective natural lens is to be replaced, it is customary to make extensive measurements on the eye prior to the removal of the defective natural lens and its replacement with a fixed focus implantable lens. Such measurements allow the selection of a lens having appropriate power for the individual, and the nominal distance to the object which is desired to be brought into focus on the retina. This approach to the problem has the disadvantage that a wide range of powers must be available to the surgeon. Since each lens is individually fabricated, the economic burden of fabricating a wide variety of powers adds substantially to the cost of lenses. It would be much cheaper to manufacture only a few lenses and use them in all patients. The cost of manufacture would be reduced and inventory requirements would be much less burdensome.

Various modifications can be made to the present invention without departing from the apparent scope thereof.

I claim:

1. A zone of focus lens for use with an eye comprising:

a. a plurality of pie-shaped optical elements joined at the sides to form a unitary lens structure having a front surface, a rear surface and a circular periphery;

b. each of said pie-shaped elements serving to create an image on a distinct portion of the retina;

c. at least two of said elements having different powers whereby objects at different distances from the eye are simultaneously brought to a focus on distinct portions of the retina; and

d. at least two of said pie-shaped optical elements are of different colors.

2. A lens according to claim **1** wherein at least two of said pie-shaped elements are of materials having different indices of refraction.

3. A lens according to claim **1** wherein at least two of said pie-shaped elements have different surface curvature.

4. A lens according to claim **3** further including a layer of transparent material overlying said front and rear surfaces to provide a smooth exterior.

5. A lens according to claim **1** wherein the boundaries between said pie-shaped elements include an anti-reflective material.

6. A lens according to claim **1** wherein the surface areas of the boundaries between said elements are masked with an opaque material to block passage of rays which would otherwise cause reflections.

7. A lens according to claim **1** wherein said pie-shaped elements are joined with a transparent adhesive material.

8. A lens according to claim **1** wherein said pie-shaped elements are joined during an extrusion process.

9. A lens according to claim **1** wherein adjacent of said pie-shaped elements have different indices of refraction.

10. A lens according to claim **9** comprised of first and second elements having first and second indices of refraction.

11. A lens according to claim **1** comprised of elements each having different indices of refraction.

12. A lens according to claim **11** consisting of three elements.

13. A lens according to claim **9** having at least three elements.

14. A lens according to claim **1** wherein pie-shaped elements of like index of refraction are positioned diametrically opposite in said lens.

15. A lens according to claim **1** wherein said pie-shaped elements providing sharp focus images of near objects are positioned horizontally across said lens.

16. A lens according to claim **1** wherein said pie-shaped elements providing sharp focus images of far objects are positioned vertically across said lens.

17. A lens according to claim **1** wherein said pie-shaped elements providing sharp focus images of near objects are positioned within the lower half of said lens.

18. First and second lenses according to claim **1** for use in left and right eyes wherein like power elements are similarly positioned.

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