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relative zones of distant and near vision (or distant, middle and near vision) portions of the lens are essentially in balance. Thus for a bifocal lens I aim to have approximately half the total viewed area each for distant and near vision. It is however possible to depart somewhat from the 50/50 situation and, for example, provide zones in the relative proportion of 60/40 or 40/60. Also it may be preferable not to distribute the areas entirely uniformly and perhaps provide a greater area of reading vision towards the periphery of the lens.

I claim:

1. A contact lens having an anterior convex and a posterior concave lens surface comprising:

a central viewing portion which has an area larger than the maximum pupil size of the wearer and has a posterior surface spaced no more than 0.05 mm from the anterior surface of the cornea of the wearer which is adapted to contain a continuous layer of tear fluid between said cornea and said central viewing portion,

said central viewing portion including a central refractive circular zone having a first focal length surrounded by a plurality of annular concentric refractive zones which alternate between a second focal length and said first focal length as they extend outwardly from said central zone, said zones being formed by variations in the curvature of the posterior concave surface of said central viewing portion, there being between about 2 and 8 zones of each focal length located in said central viewing portion such that the ratio of the total area of said zones of said first focal length to the total area of

6

said zones of said second focal length is about 60:40, and,

a peripheral lens portion having a posterior curvature corresponding to the anterior curvature of the cornea of the wearer, said peripheral portion adapted to float upon the cornea of the wearer's eye adjacent its pupil.

2. The contact lens according to claim 1 in which the portions of the posterior surface of said central viewing area forming the zones of said first focal length are blended into the curvature of the alternate zones so as to form a smooth junction between adjacent zones without any sharp discontinuities.

3. The contact lens according to claim 1 wherein the difference between the first and second focal lengths is such that the lens has two powers, one being about 2 to 2.5 diopters greater than the other.

4. The contact lens of claim 1, wherein said first focal length is appropriate for distant vision and said second focal length is appropriate for near vision, and wherein said concentric annular zones are of substantially equal width.

5. The contact lens of claim 1, wherein said zones are formed by variations in the curvature of both the concave posterior and the convex anterior surfaces of said central viewing portion, said variations in said surfaces being offset relative to each other.

6. The contact lens of claim 1, wherein the focal length of said peripheral lens portion is substantially the same as the focal length of one of said zones.

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