

surfaces 17 and 21 lie in a common plane also containing the optical axis 12 of the lens, the two residual crescent-shaped zones defined by the surfaces 15 and 17 and the generally circular zone defined by the surface 21 are symmetrical with a vertical plane through the lens and containing the optical axis thereof when in use on the user's eye. This left/right symmetry is considered desirable in the contact lenses of this invention.

Lenses in accord with this invention are multisurfaced and multi-focal. The necessary and sufficient condition is that the second anterior surface formed is offset in relation to the initial anterior surface of the lens so as to impart the asymmetric weight distribution noted above. It should also be noted that the formation of the third anterior surface imparts an even greater degree of weight asymmetry as is evident from FIG. 5 wherein it will be seen that some of the lens material is removed between the extension of the secondary surface 17' and the third surface 21.

It is also within the realm of this invention that the initial surface 15 formed on the anterior surface of the lens be centered in offset relation to the optical axis which, in and of itself, will lend some degree of weight asymmetry ab initial. The secondary surface and the third surface, if any, will of course emphasize this weight asymmetry.

Any lens material may be used as it becomes available and techniques for forming contact lenses are likewise usable. Currently, the rapid advancement in the composition and variety of optical materials offered for the fabrication of contact lenses has been followed by technological advances in the equipment used in the production of contact lenses. Micro-processor and computer controlled lathes have found their place in high tech production methods of contact lenses along with laser technology for precise control and reproducibility of the lenses. These developments permit the variations as are suggested in FIG. 7 easily to be utilized. This Figure illustrates that variations in decentering may be employed to control the positioning and/or sizes of the various zones of the lenses. Also, it is possible to truncate the lowermost edge of the lens as indicated at 24 to afford a degree of relief with respect to the lower eyelid of the user, which may be desirable for reading.

Lenses formed by the method described above are produced to fit like any other well fitting contact lenses. The reading part of the final lens is chosen to provide the reading prescription needed for an individual wearer for whom the lenses are being made. The lens body may be made in virtually any prescription power needed and from any material. If an intermediate prescription is needed, the correct curve is next cut into the lens body and prior to the final cut which provides the far distance correction. After all prescription powers are provided, the lens is then polished if needed to provide wearable lenses. This polishing partly or completely obliterates the divisions between the different power zones which provide the multifocal effect. The diameter of the lens as well as the secondary curve height and the diameter of the distance power will vary with the height of the bifocal segment and the intermediate distance segment if used. These zones are all variable to accommodate the various segment or zone heights needed to accommodate each patient's eyes. These zone heights vary with the distance from the lower edge of the pupil to the top edge of the lower lid of the eye. The height or size of these zones is controlled by the amounts of decentration of the curves of

the various surfaces. As noted, the lens can be further adjusted by truncation of the lowermost edge of the lens if the reading and/or the intermediate zones need to be lowered.

Having described my invention, it is to be understood that it is not to be limited by the precise terminology and language employed either above or in the following claims, but in accord with the spirit and intent of the coverage intended by the claims herein.

What is claimed is:

1. The method of making a bifocal contact lens usable by presbyopic patients which comprises the steps of:
 - a. providing a lens blank having a concave posterior surface shaped in conformity with a patient's cornea to define an optical axis;
 - b. rotating the lens blank about an axis of rotation substantially coincidental with the optical axis as defined by the posterior surface;
 - c. cutting a convex first corrective surface on the anterior surface of the lens blank while the lens blank is being rotated about the axis of rotation and until the first corrective surface forms substantially the entirety of the anterior surface, the first corrective surface providing a power for the lens conforming with the nearest distance correction of the patient's prescription and being centered on the axis of rotation;
 - d. shifting the lens blank perpendicularly to the axis of rotation to offset the lens blank parallel to the axis of rotation and to define a second axis of rotation; and
 - e. rotating the offset lens blank about said second axis of rotation and cutting a convex second corrective surface on the anterior surface of the offset lens blank to thin the lens eccentrically by removing some of the first corrective surface while leaving a first corrective surface which is of crescent shape, the second corrective surface being of greater radius than the first corrective surface to form therewith substantially the entirety of the anterior surface of the lens, the lens being devoid of ballasting other than that provided by the eccentric thinning of the lens.
2. A contact lens made according to the method defined in claim 1.
3. A soft contact lens made according to the method defined in claim 1.
4. The method of making a multifocal contact lens which comprises the steps of:
 - a. providing a lens blank having a concave posterior surface shaped in conformity with a patient's cornea to define an optical axis;
 - b. rotating the lens blank about an axis of rotation substantially coincidental with the optical axis as defined by the posterior surface;
 - c. cutting a convex first corrective anterior surface concentrically on the lens blank while the lens blank is being rotated about the axis of rotation to establish a lens whose anterior surface is at least substantially completely defined by the first corrective surface providing a power for the lens conforming with the nearest distance correction of the patient's prescription;
 - d. determining a chord of the first corrective surface which extends from a point on the first corrective surface adjacent the optical axis of the lens to a point on the first corrective surface substantially at the margin thereof, the chord defining a line which