

face before the blank is distributed to the contact lens manufacturers. These blanks can be cast with finished inside surfaces and rough outside surfaces.

What is claimed is:

1. A corneal contact lens of concavo-convex form and of a size to lie within the area defined by the cornea, having an inner ellipsoidal surface, said ellipsoidal surface having its vertex on the major axis of the ellipsoid wherein in at least a first meridian the ellipse conforms substantially to the equations

$$(1) \quad r_o = -\frac{b^2}{a}$$

$$(2) \quad r_x = \frac{(a^2x^2 + b^4 - b^2x^2)^{3/2}}{ab^4}$$

where

r_o = the radius of curvature at the apex of the cornea;

r_x = the radius of curvature of the cornea at that point which is a distance x approximately 4.5 mm. from the major axis of the ellipse contained in said meridian;

a = the semi-major axis of the ellipse in said meridian;

and

b = the semi-minor axis of said ellipse.

2. A corneal contact lens as defined in claim 1, wherein the central portion of said ellipsoidal surface closely approximates a spherical surface having the radius r_o .

3. A corneal contact lens as defined in claim 1, wherein the meridian at right angles to said first meridian is a circle and said ellipsoidal surface constitutes a toric ellipsoid.

4. A corneal contact lens as defined in claim 1, wherein the meridian at right angles to said first meridian is an ellipse which differs from the ellipse in the first meridian, and said ellipsoidal surface constitutes an elliptical torus.

5. A corneal contact lens as defined in claim 1 having an unfinished outer surface opposite said ellipsoidal surface, and being of sufficient thickness to allow the grind-

ing and polishing of a suitable optical curve on said outer surface to satisfy a desired prescription.

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