the part 30 or 30a for instance inserted in the part 32 or 32a. When built up from different parts, the refractive index for the different parts and/or the thickness thereof may be selected so that the different prescriptions for the different zones are had with the same radius of curvature across the entire front surface of the lens. The curvatures illustrated on the drawings are arcs of circles but may be parabolic or hyperbolic in form particularly when the lenses are molded. One or more of the surfaces may also be plano instead of curved.

As far as the fit of the inside surface of the lens with respect to the cornea 10 is concerned, this forms no part of my present invention and may be determined by methods now known as disclosed in my co-pending application, Serial No. 701,153 filed December 6, 1957. In general, the lens should be as small as possible, compatible with such considerations as a size large enough that the edge of the lens does not seriously interfere with normal vision and large enough to provide enough area for retention of the lens on the cornea by capillary attraction in the lacrimal layer. The lens is desirably small in diameter to make it as light as possible and likewise is relatively thin (such as 0.1 to 0.3 mm. at the center) and, of course, for the higher powered plus lenses must be thicker in order to carry the curvatures out to the periphery of the lens without making the periphery too thin and fragile. In negative lenses, on the other hand, extreme thinness at the center is desired so long as there is no danger of the center breaking through, and the higher the negative power the thinner the center must be for the same over-all weight of lens.

The peripheral edges of the lenses are preferably rounded as shown in FIGS. 4 and 7, and/or may be bevelled outside or inside or both (FIGS. 5 and 6) as desired. These variations are considerations outside the scope of my present invention and are normally practiced by those in the field of contact lens fitting in order to properly adapt the lens to the individual eye and eliminate the tendency for the eyelid to catch on the edge of the lens and displace it from the cornea as well as to "loosen" a lens that is fitted too tightly and to take care of similar considerations.

Some changes may be made in the construction and arrangement of the parts of my bifocal corneal contact lens without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may reasonably be included within their scope.

I claim as my invention:

1. A bifocal corneal contact lens of generally concavo-convex cross-section adapted to be retained on the cornea of the eye by capillary attraction produced by a lacrimal layer between the lens and the cornea, said lens having a posterior surface curved to fit the cornea of a patient to which the lens is applied with a tendency to remain centered thereon and having a single base curve in at least the optical area thereof, said lens being of a diameter greater than the normal pupil size and less than the limbal area of the eye, and having its lower peripheral edge normally positioned adjacent the upper edge of the lower eyelid when the lens is centered on the cornea and the patient is looking straight ahead, said posterior surface having its peripheral edge formed to provide clearance between the lens edge and the cornea to facilitate upward shifting movement of the lens whereby, when the eye moves to a downcast position, the lens will be shifted upwardly relative to the cornea by contact of its lower edge with the upper edge of the lower eyelid, said lens having a central zone and a concentric outer zone, said central zone being of substantially circular outline and of a diameter between 3 mm. and 6 mm. whereby central vision may shift therefrom to said outer zone upon engagement of the lower edge of said lens with the upper edge of the lower eyelid, said central zone being powered on the anterior surface for distance vision thereof with respect to the cornea of the patient, said outer zone being powered also on the anterior surface thereof for near vision with respect to such cornea, the anterior surface of said central zone having a radius of curvature flatter than the radius of curvature of the anterior surface of said outer zone to provide the respective distance and near vision powers, said outer zone completely surrounding said central zone so as to be equally effective for near vision in all positions of rotation of said lens with respect to the cornea.

2. A bifocal corneal contact lens of generally concavo-convex cross-section adapted to be retained on the cornea of the eye by capillary attraction produced by a lacrimal layer between the lens and the cornea, said lens having a posterior surface curved to fit the cornea of a patient to which the lens is applied with a tendency to remain centered thereon and having a single base curve in at least the optical area thereof, said lens having a maximum external dimension greater than the normal pupil size and less than the limbal area of the eye and having an outer lowermost portion normally positioned adjacent the upper edge of the lower eyelid when the lens is centered on the cornea and the patient is looking straight ahead, said posterior surface having its outer peripheral portion formed to provide clearance between the lens edge and the cornea to facilitate upward shifting movement of the lens whereby, when the eye moves to a downcast position the lens will be shifted upwardly relative to the cornea by contact of its lowermost portion with the upper edge of the lower eyelid, said lens having a central zone and an outer zone, said central zone being of substantially circular outline and of a diameter between 3 mm. and 6 mm. whereby central vision may shift therefrom to said outer zone upon engagement of the lowermost portion of said lens with the upper edge of the lower eyelid, said central zone being powered on the anterior surface for distance vision thereof with respect to the cornea of the patient, said outer zone being powered, also on the anterior surface thereof, for near vision with respect to such cornea, the anterior surface of said central zone having a radius of curvature flatter than the radious of curvature of the anterior surface of said outer zone to provide the respective distance and near vision powers.

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