

the swinging of the lens blank carrier about the axis 7 (Figure 11). This may be accomplished with the machine illustrated in my copending application.

It will be apparent from the above description that with all forms of my invention, there is provided an elongated horizontally disposed inner distance vision portion located substantially at the center of the lens, a near vision portion disposed directly above and a near vision portion disposed directly below the elongated distance vision portion, and a surrounding outer distance vision or intermediate vision portion. In each form of the lens, there is a substantially flat dividing line between the inner distance vision portion and the upper or lower near vision portion. Furthermore, the optical center of each near vision portion will be located within the inner distance vision portion and adjacent the substantially flat dividing line between such portion and the near portion. Thus, "jump of the image" or prismatic displacement will be substantially eliminated when the line of vision passes from the inner distance vision portion to the adjacent near vision portion. In all forms of my lens blank, the radius of curvature of the surface of the cavity or the inner distance vision portion is shorter than the radius of curvature of the adjacent surface so that the ends of the cavity will merge with the adjacent surface and there will be no shoulders at the ends of the cavity.

It will be apparent that my lens will meet all of the requirements set out at the beginning of this description. My lens is very neat and attractive in appearance. It is of such a nature that it may be produced at a comparatively low cost. Furthermore, I have provided a novel, efficient, simple and practical method for producing my lens.

In the following claims where I specify that the outer area of the lens is a distance vision portion, it is to be understood that I also intend to include an intermediate vision portion. Furthermore, it is to be understood that the inner distance vision portion may be an intermediate vision portion since it is still a "distance" portion as compared to the near portion.

Having thus described my invention, what I claim is:

1. A multifocal ophthalmic lens blank formed from a single piece of glass of substantially the same index of refraction throughout, said blank having an inner area of a predetermined lesser curvature and an outer area of a predetermined curvature formed on one surface thereof, said inner area having an elongated cavity formed therein, the long boundaries of the cavity lying within the boundaries of the inner area, the radius of curvature of the bottom of the cavity being shorter than that of the surface of the inner area so that there will be shoulders formed at both side edges of said cavity and the ends of said cavity will substantially merge with the surface adjacent thereto.

2. A multifocal ophthalmic lens blank formed from a single piece of glass of substantially the same index of refraction throughout, said blank having an inner circular area of a predetermined lesser curvature and an outer area of a predetermined different curvature formed on one surface thereof, said inner circular area having an elongated cavity formed therein, the long boundaries of the cavity lying within the boundaries of the inner area, the radius of curvature of the bottom of the cavity being shorter than that of the surface of the inner area so that there will be shoulders formed at both side edges of said cavity and the ends of said cavity will substantially merge with the surface adjacent thereto.

3. A one-piece multi-focal lens blank comprising an outer distance vision portion of a suitable radius of curvature and an inner near vision portion of a greater radius of curvature lying wholly within the distance vision portion, said portions substantially merging at their junction lines, and an additional distance vision portion ground in the near vision portion, the radius of curvature of the distance portion being shorter than that of the near vision portion, said additional distance vision portion being elongated and having shoulders formed along its top and bottom edges and having its ends substantially merging with the adjacent surface, the long boundaries of the cavity lying within the boundaries of the inner near vision portion.

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