F. H. KAHN.

LENS FASTENING.

APPLICATION FILED AUG. 28, 1914.

1,127,013.

Patented Feb. 2. 1915

Fig. 1.

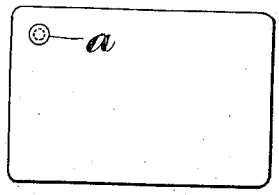


Fig. 2.



Fig. 5.

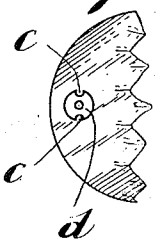


Fig. 6.

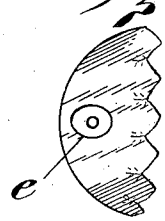


Fig. 3.

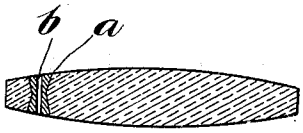


Fig. 4.

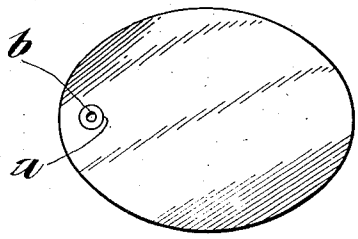


Fig. 7.

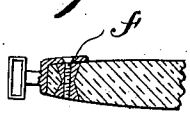


Fig. 8.



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UNITED STATES PATENT OFFICE.

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LENS-FASTENING.

1,127,013. Specification of Letters Patent. Patented Feb. 2, 1915.

Application filed August 28. 1914. Serial No. 859,089.

To all whom it may concern:

Be it known that I, FERNANDO H. KAHN, a citizen of the United States, and resident of San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Lens-Fastenings, of which the following is a specification.

This invention relates to means for preparing lens blanks for mounting purposes, and it consists in the main of means whereby a metal plug may be incorporated in a lens blank, in order that by this means a metal bearing may be provided in and about said orifice to receive the screw or rivet whereby the mount is secured to the lens, to provide rigid surfaces within the lens whereby said mounting screw or rivet may be securely tightened without risk of fracturing the lens.

One form of my invention consists in the provision of an orifice in a lens blank in the appropriate position, said orifice converging inwardly from opposite sides of the blank, filling said orifice with molten metal which thus becomes fused within said orifice, and, due to the constricted character of the orifice is securely anchored therein. A lens blank thus equipped is then properly shaped, ground and polished and the metal plug therein is drilled axially with the hole to receive the usual mounting screw or rivet, which latter may then be secured tightly with the metal plug as a solid unbreakable bearing therefor.

In another form of my invention a metal plug of the desired shape may be placed in a suitable mold and molten glass may then be poured into said mold about said plug for the molded production of a lens blank with plug insertion, the lens being shaped, ground and polished subsequently. The plug, which is preferably of metal, but may obviously be of other suitable material may be so externally shaped or notched as to be incapable of rotating in its lens orifice or bearing.

Other features and advantages will appear hereinafter.

In the drawing accompanying this application: Figure 1 is a plan view of a rough lens blank, having a metal plug. Fig. 2 is a cross sectional view of Fig. 1 taken through the plug. Fig. 3 is a cross sectional view of a lens that has been shaped and finished from the aforesaid blank, with a hole drilled axially through the plug, and Fig. 4 is a plan view of Fig. 3. Fig. 5 is a detail of a lens having an orifice with centering spurs to fit in peripheral notches in the plug and hold said plug against rotation. Fig. 6 is a similar view showing an oval orifice with oval plug therein for a similar purpose. Fig. 7 is a cross sectional view showing a one sided strap for connection with the lens, and Fig. 8 is a similar view showing a usual form of strap applied to the lens.

In carrying out my invention, I take an ordinary lens blank, such as shown in Figs. 1 and 2 and provide near the edge thereof a transverse orifice *a* of area greater than is usual for the reception of a mounting screw or rivet. Said orifice is preferably constructed as seen from opposite sides of the blank, and is filled in any suitable manner with a metal plug which may be produced therein by pouring molten metal into said orifice, becoming fused therein, the constricted characted of the orifice causing it to provide an anchorage to retain the plug therein, preventing it from becoming dislodged at either side of the blank. The metal employed for this purpose may be of such melting point that in a molten state it may with safety be filled into the orifice without liability of splitting or damaging the lens, and the expedient may be resorted to of raising the temperature of the lens to approximately the temperature at which the metal is introduced in a molten state to the same end. With a metallic plug introduced in the lens blank, the latter may be treated in the usual manner in shaping, grinding and polishing the lens, and at any desired stage in the operation the metallic plug therein may be drilled with a hole, as *b*, to provide the usual orifice threaded or otherwise for the reception of a mounting screw, rivet or other fastening pin. The finished lens with its metallic plug as a bearing will be free from the usual liability of damaging the lens when tightening up the mounting screw, or performing a riveting operation whereby the lens may be so securely attached to its mount as to be free from the danger of the connection becoming loose.

It is well known that when pinning the usual strap to a lens by means of a mounting screw, the joint cannot be tightened up beyond a certain point as the pressure in so

doing would cause the lens to fly, but with this improvement whereby a metallic bearing of sufficient area is furnished, it will be quite evident that the tightening can be efficiently performed and the mount rendered perfectly secure.

As shown in Fig. 5 the orifice in the lens may have intruding spurs or projections *c* whereby, when the plug, as *d* is formed therein said plug will be incapable of loosening by rotation. Or, as in Fig. 6 the orifice may be of oval or other irregular shape for a like purpose.

While I have described the plug as formed in the lens blank by pouring molten metal therein, it is equally obvious that the process may be reversed and the lens blank produced by molding it about a formed plug, the results being the same in both instances. In the latter case the plug may if desired be drilled and threaded before the lens blank is formed about it.

One of the advantages of the rigid bearing which the metal or other plug affords for the mount is that the screw or other fastening may be so firmly secured therein that the strap is not required to extend over both sides of the lens. Thus, in Fig. 7 I show a strap *f* which extends over only one side, which may be inner side of the lens, next the wearer, where it is obscured from view, the outer side exposing only the plug and screw end.

In Fig. 8 is shown the usual strap embracing both sides of the lens.

I claim:

1. A lens having a transverse orifice inwardly constricted from opposite sides and having a metallic plug molded therein, to comprise an interlocking permanent anchorage.

2. A lens having a transverse orifice, inwardly constricted from opposite sides, said orifice containing a metallic plug fused therein to form a permanent bearing portion and axially pierced to receive a mount connector.

3. A lens having a transverse orifice, permanently constricted inwardly from opposite sides, said orifice containing a metallic plug fused therein, said plug at opposite sides forming bearing surfaces by which to secure a mount.

4. The method of making lenses for eyeglasses and the like consisting in forming an enlarged orifice transversely through said blank, fusing a metallic plug in said orifice to form a permanent bearing portion, shaping, grinding, and finishing the blank in lens form, and forming a thread in said orifice to receive a mount supporting screw.

5. A lens having a transverse orifice inwardly constricted from opposite sides and a plug of relatively infrangible material molded therein to form an interlocking permanent anchorage.

6. A lens having a transverse orifice inwardly constricted from opposite sides and a plug of relatively infrangible material therein, one of said elements having molded engagement with the other to effect an interlocking permanent union.

7. The combination with a lens having a plug of relatively infrangible unyielding material permanently held therein, of a mount strap extending over one side only of said lens, and means connecting said strap with said plug.

8. In combination, a lens having an intermediately constricted transverse aperture therein, and a plug of relatively infrangible, unyielding material molded within said orifice to comprise a permanently anchored bearing portion of said lens, said plug being penetrated with a threaded orifice to engage a mount screw substantially throughout its extent.

9. A lens which has been shaped, ground and polished from a blank provided with a transverse orifice inwardly constricted from opposite sides, said orifice having molded therein a permanent bearing portion in the form of a plug of relatively infrangible, unyielding material whose exposed surfaces lie in the radius of curvature of the finished lens, said plug being axially pierced and threaded to engage a mount screw substantially throughout its extent.

Signed at San Francisco in the county of San Francisco and State of California this 8th day of August A. D. 1914.

FERNANDO H. KAHN.

Witnesses:

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