

S. CALLISON.
LENS AND MOUNTING THEREFOR.
APPLICATION FILED FEB. 26, 1912.

1,046,733.

Patented Dec. 10, 1912.

Fig. 1.

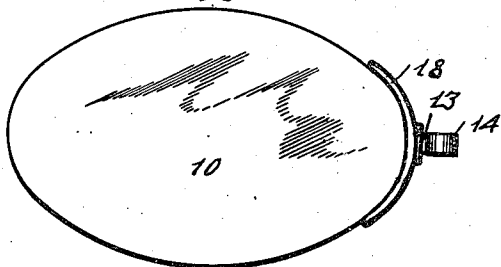


Fig. 6.

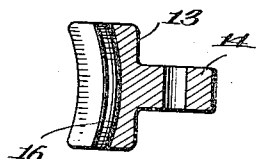


Fig. 2.

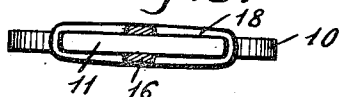


Fig. 7.



Fig. 3.

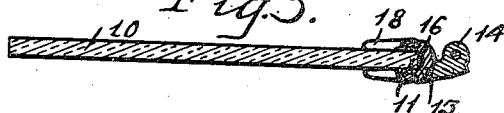


Fig. 4.

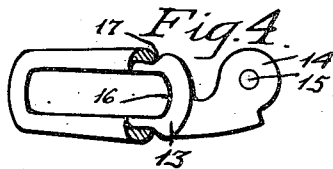
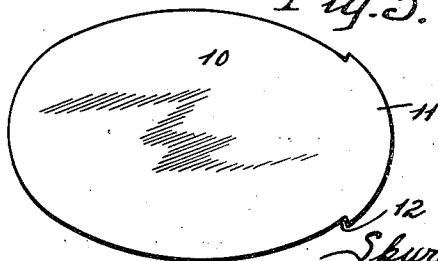


Fig. 5.



Witnesses.
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UNITED STATES PATENT OFFICE.

SPURGEON CALLISON, OF DEXTER, IOWA.

LENS AND MOUNTING THEREFOR.

1,046,733.

Specification of Letters Patent.

Patented Dec. 10, 1912.

Application filed February 26, 1912. Serial No. 680,063.

To all whom it may concern:

Be it known that I, SPURGEON CALLISON, a citizen of the United States, residing at Dexter, in the county of Dallas and State of Iowa, have invented a new and useful Lens and Mounting Therefor, of which the following is a specification.

The object of my device is to provide a lens of special construction, and a mounting for said lens, of simple, durable, and inexpensive construction, so made that the mounting may be quickly and readily secured to the lens or detached therefrom, which mounting detachably grips the lens firmly and securely.

It is a further object to provide a lens and a mounting therefor, so constructed that the lens may be detached from or attached to the mounting, without the use of screws or the like, or of tools, the lens being firmly held in the mounting by spring pressure.

A further object is to provide a lens and a detachable mounting therefor, which mounting and lens can be made in certain standard sizes, so that the mountings of the same size, may be secured to lenses of various thicknesses.

My invention consists in certain details, in the construction, arrangement and combination of the various parts, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows a side elevation of a lens and a detachable mounting thereon, embodying my invention. Fig. 2 shows an end view of said lens and mounting, the latter being shown partly in section. Fig. 3 shows a central, horizontal, sectional view through my improved lens and mounting therefor. Fig. 4 shows a detail, plan view of my improved mounting. Fig. 5 shows a side elevation of my improved lens. Fig. 6 shows a central, vertical, sectional view of the body of the mounting. Fig. 7 shows an end elevation of the spring metal loop detached from the body.

My improved mounting and lens are designed to be used for eye-glasses, and spectacles, and the mounting may be used for securing the lens to the nose piece or to a temple.

It is to be noted that my lens is rimless and is detachably secured to my improved mounting.

In the accompanying drawing, I have used the reference numeral 10, to indicate generally, a lens which is of ordinary construction, excepting that my lens is provided with an extension or enlarged portion 11 at one or both ends, as may be desired. At each end of the extension 11, said extension forms a shoulder 12, with relation to the body of the lens.

My mounting consists of a body 13, which may be provided with a lug 14, and an opening 15 therein or any suitable means for securing the mounting to a nose piece or a temple, and is also provided with a curved slot 16, designed to receive between its sides the extension 11 of the lens. The bottom of the slot 16 is curved from side to side, as shown in Fig. 4, and the slot is also curved from end to end, as shown in Fig. 6. On the outer surface of each side of the body 13, is a transverse groove 17, designed to receive the sides of the loop hereinafter mentioned.

The body 13 is preferably made of annealed metal, so its sides may be pressed toward each other. In this connection, it is to be noted that the mountings are preferably made in standard sizes and that the body 13 is made of annealed metal, in order that its free ends may be pressed toward each other to closely engage the sides of the extension 11 of a lens, thus enabling me to closely grip lenses of varying thickness between the sides of the grooves 16. I mount an endless loop 18 on the lugs 17. Before the loop 18 is secured to the mounting, if viewed from an end elevation, its sides are approximately parallel. The inner sides of the ends of the loop are preferably curved so that if the lens to be mounted is thinner than the mounting it may be bent together easily without danger of breaking, and so that if the shoulders are square, the loop engages the shoulders at two points regardless of the thickness of the lens, while if the shoulder is rounded, the end of the loop engages and rests against the end of the shoulder. The sides of the loop 18 are mounted at their centers in the grooves 17, and are secured to the lugs 16. The sides of the loop at the points where they are secured to the body 13, are provided with notches so that the outer portions of the sides of the loop are approximately flush with the outer sides of the body 13 when the loop is mounted on said body. When viewed in side ele-

variation, as shown in Fig. 2, the loops 18 are so constructed that they form a portion of the end of an ellipse, normally of slightly greater curvature than the end of the extension 11. The purpose of making the curvature of the end of the extension 11, will be hereinafter more fully set forth. The sides of the loops, preferably taper from a maximum thickness at their centers to a minimum thickness at their ends.

When my mounting is completed, it may be detachably secured to the lens 10, by placing the extension 11 in the slot 16, as shown in Fig. 3, with one of the loops 18 engaging one of the shoulders 12. The other end of said loop 18 is then pressed over the other shoulder. The length of the loop 18, is such that when mounted on the lens, the sides of said loop will extend along the sides of the extension 11, adjacent to the outer edge thereof, as shown in Fig. 1. The loops 18 are of resilient metal, and on account of their curvature, with relation to the curvature of the extension 11, when secured to the lens, they grip the same firmly, and also fit close to the outer edge of the extension 11. The length of the loops 18 with relation to the length of the outer edge of the extension, is such that when the loops are mounted on the lens with their ends around the shoulders 12, said loops stand in the position shown in Fig. 1, as above set forth. In drawing the ends of the loop 18 around the extreme point of the shoulders 12, the sides of the loop on each side of the mounting, are for an instant drawing to a curvature less than the curvature of the extension 11, so that if viewed in side elevation, the extension 11 would extend between the sides of the loop 18, and slightly beyond the same. The advantage of having a loop instead of a solid piece with a slot therein, is now made clear. If the sides of the loop were connected by a portion which engaged the end of the extension 11, the loop could not be made to straddle the extension 11 for the purpose of mounting it thereon. The normal form of the loop and its resiliency tend to draw it to the position shown in Fig. 1, as soon as it is mounted on the lens, and to draw the ends of the loop toward each other and the size of the loop with relation to the lens is such that when mounted on the lens, the loop holds the lens firmly against the body 13, between the sides of the slot 16, as shown in Fig. 3.

It will be seen that the loop 18, on account of being secured on both sides of the body 13, forms practically two loops, one extending in one direction, and the other in the other direction from the body 13.

My lenses and mountings are made in standard sizes. The length of the loop in the standard size of the mounting is such that it will fit snugly the thinnest lens of

the standard size, designed to be used with that particular size of mounting. If a thicker lens of the standard size is used with that particular size of mounting, the shoulders 12 may be slightly cut away by filing or other means, so that the loop will be long enough to fit the lens used. It will therefore be seen that a mounting of standard size may be used with a lens which is standard as to length and width and curvature in outline, but varying in thickness. I consider this feature of my invention to be of great advantage, inasmuch as lenses are commonly made in standard sizes as to circumference and curvature but varying considerably in thickness. It will be seen that when the mounting is used with a comparatively thin lens, the latter will not extend from one side to the other of the slot 16. The fact that the bottom of the groove 16 is curved from side to side enables me to firmly grip the lens between the bottom of said groove and the ends of the loop. The body 13 is made of annealed metal, so that it may be easily pressed against the sides of the outer edge of the extension 11, regardless of the thickness of the lens. It appears therefore, that when my mounting is properly attached to my lens, the latter will be engaged by the body 13, between the sides of the slot 16, by the inner surfaces of the said sides and by the sides and ends of the loop 18.

The advantages of a device of this kind, are numerous. The lens is easily detached from the mounting without the use of tools, and without the use of screws. Extra lenses may be carried, and may be placed in the mounting when a lens is broken. The lens is firmly secured in the mounting, and is not subject to lateral play or vertical play, which causes a very common objection to the ordinary forms of mountings now in use. It will be seen that a large number of variations may be made in details of construction of my device, without in any way departing from its essential purpose. The lens may be quickly, and easily secured in the mounting, or detached therefrom, and when attached to the mounting is engaged thereby at several points, and is mounted and firmly held in the proper position. The position of the loop 18 with relation to the extension 11, gives the lens and the mounting a good appearance, and almost wholly conceals the extension 11, giving the lens the appearance of a perfect ellipse.

I claim as my invention:

1. In a device of the class described, a lens mounting comprising a body having a groove formed therein designed to fit the end of an eye-glass lens, said groove being incurved from side to side and also from end to end, a loop of spring metal, one side of which is secured to each side of said body

and the ends of which are designed to engage shoulders on a lens.

2. In a device of the class described, a mounting, comprising a body having a groove formed therein, designed to fit the curved end of a lens, a loop of spring metal, one side of which is secured to each side of said body, and the ends of which are designed to engage shoulders on a lens.

3. In a device of the class described, the combination of a lens, having an enlarged portion at one end, which forms shoulders with reference to the body of the lens, a mounting comprising a body, having a groove in one surface designed to receive said enlarged portion of the lens, an endless spring metal loop, the sides of which are secured to the outer sides of said body and the ends of which engage said shoulders.

4. In a device of the class described, the combination of a lens, having an enlarged portion at one end, which forms shoulders with reference to the body of the lens, a mounting comprising a body, having a slot formed therein, to receive the edge of the enlarged portion of the lens, an endless loop of resilient metal, one side of which is secured on the outer sides of the body, the re-

spective ends of which loop detachably engage the said shoulder, with the sides of each end of the loop adjacent to the sides of said enlarged portion at the outer edge thereof.

5. In a device of the class described, the combination of a lens, having an enlarged portion at one end, which forms shoulders with reference to the body of the lens, with a mounting comprising a body of resilient metal having a groove formed therein designed to receive the edge of the enlarged portion of the lens, an elongated endless loop of resilient metal, two internal portions of which are secured to the outer sides of said body, the respective ends of which loop detachably receive the said shoulders, said loop being arranged to normally stand in position with its sides parallel, and curved but having normally greater curvature than the outer edge of said enlarged portion.

Des Moines, Iowa, January 2, 1912.

SPURGEON CALLISON.

Witnesses:

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