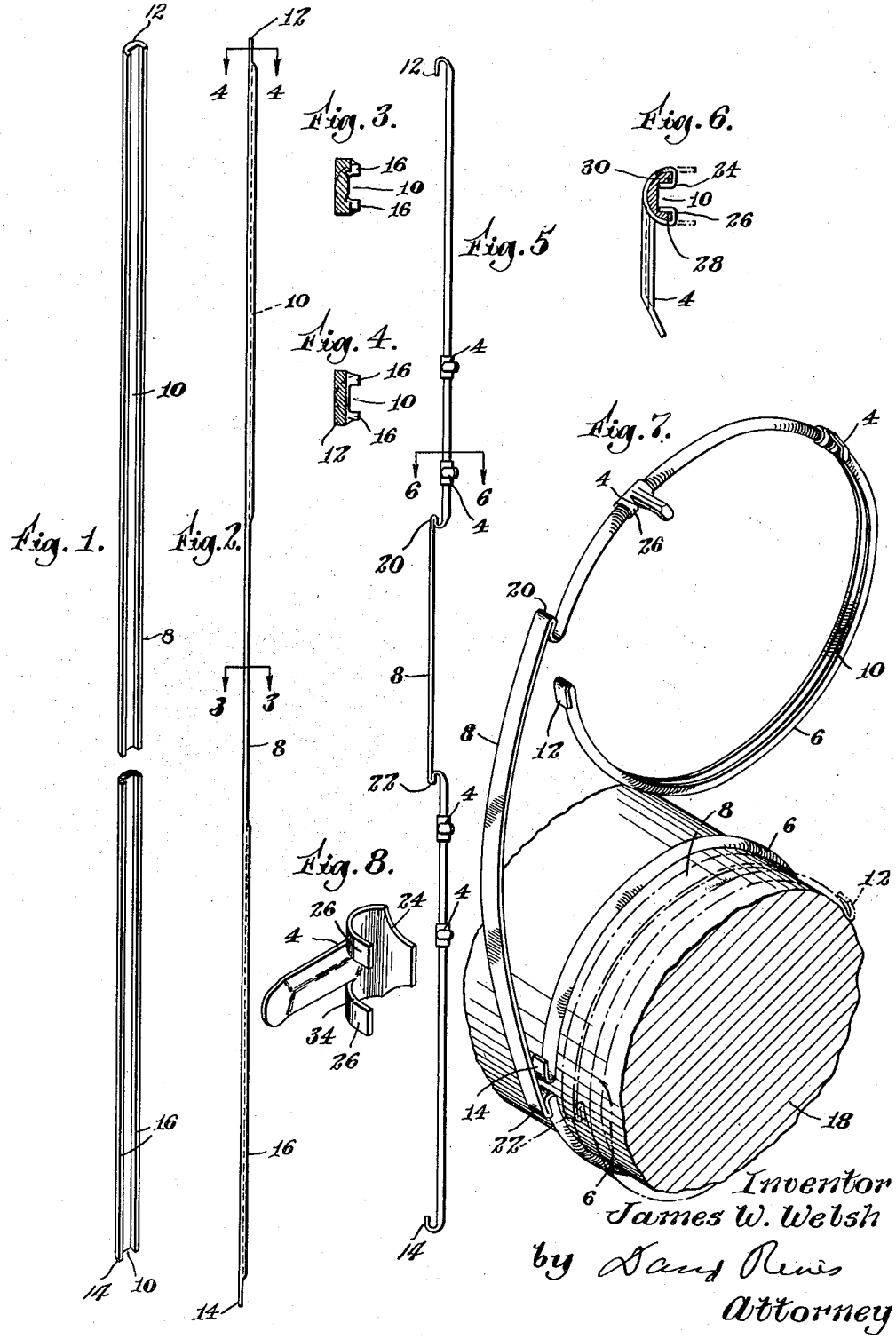
Aug. 10, 1937. J. W. WELSH 2,089,236

OPHTHALMIC MOUNTING

Filed Dec. 31, 1934 2 Sheets-Sheet 1



Aug. 10, 1937. J. W. WELSH 2,089,236

OPHTHALMIC MOUNTING

Filed Dec. 31, 1934 2 Sheets-Sheet 2

Fig. 9.

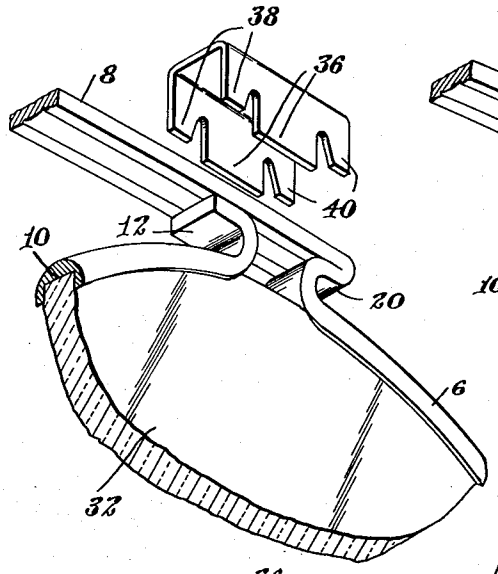
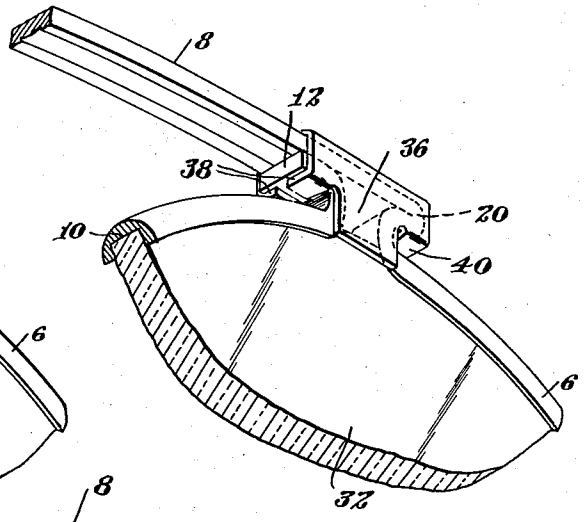


Fig. 10.



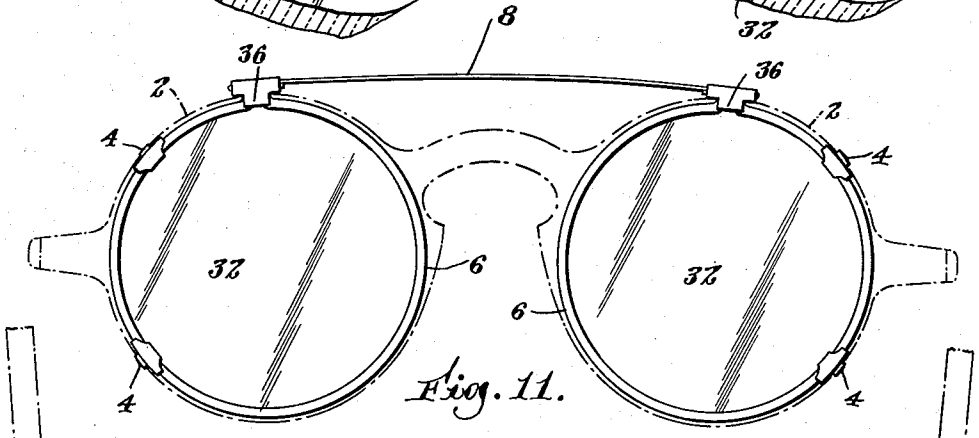


Fig. 11.

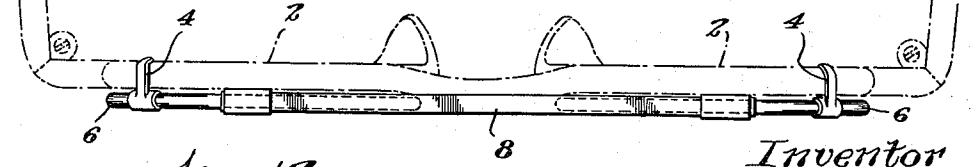


Fig. 12.

Inventor
James W. Welsh
by Davis Lewis
Attorney

Patented Aug. 10, 1937 2,089,236

UNITED STATES PATENT OFFICE

2,089,236

OPHTHALMIC MOUNTING

James Wilson Welsh, Providence, R. I., assignor to The Welsh Manufacturing Company, Providence, R. I., a corporation of Rhode Island

Application December 31, 1934, Serial No. 759,859

4 Claims. (Cl. 88—41)

The present invention relates to ophthalmic mountings.

An object of the present invention is to provide a new and improved ophthalmic mounting that shall be cheap to manufacture, efficient in operation, and practicable commercially.

A further object is to improve upon the construction of ophthalmic-mounting attachments.

Other objects of the invention will be explained hereinafter, and will be particularly pointed out in the appended claims.

The invention will now be explained in connection with the accompanying drawings, in which Fig. 1 is a perspective of an eye-wire rod that is adapted to be manufactured into an ophthalmic mounting in accordance with the present invention; Fig. 2 is a corresponding elevation; Fig. 3 is a transverse section, taken upon the line 3—3 of Fig. 2, upon a larger scale than in Figs. 1 and 2; Fig. 4 is a similar section taken upon the line 4—4 of Fig. 2; Fig. 5 is an elevation of the rod illustrated in Figs. 1 and 2, after several steps in the manufacture of the ophthalmic mounting of the present invention; Fig. 6 is a section taken upon the line 6—6 of Fig. 5, looking in the direction of the arrows upon a larger scale than in Fig. 5; Fig. 7 illustrates a further step in the manufacture of the novel mounting of the present invention; Fig. 8 is a perspective of a detail enlarged with respect to Fig. 7; Figs. 9 and 10 are similarly enlarged perspective views illustrating still further steps in the manufacture of the mounting according to the present invention; Fig. 11 is a front elevation of a preferred embodiment of the present invention, shown mounted upon a spectacle frame, illustrated in dotted lines; and Fig. 12 is a corresponding plan of the same.

In Fig. 11, there is illustrated, in dotted lines, a spectacle mounting having rims 2 on which the mounting of the present invention is positioned by means of clips 4. Four such clips are illustrated in Fig. 11, two on each of the two rim elements 6. The rims 6 are connected together by a spring bridge 8. The rims 6 and the bridge 8 are constituted, according to the present invention, of a one-piece, single rod of eye-wire metal, shown in its original form in Figs. 1 and 3, provided on the inner face with a continuous, lens-receiving groove 10. These rods may be cut, in successive, suitable lengths, from eye-wire stock that is obtainable on the market, or they may be otherwise procured. The lens-receiving groove 10 of such rods is usually of smaller width than the cross-sectional diameter of the rod.

Starting with the eye-wire rod illustrated in Fig. 1, it is desirable to eliminate the groove 10 from the central portion 8, and also from the extreme ends 12 and 14. This may be effected in any preferred manner, as by means of dies that flatten out the side walls 16 of the groove. The rod then assumes the condition illustrated in Fig. 2; the central portion 8 has become flattened out, to constitute a spring bridge, and the ends 12 and 14 have similarly become flattened out, while the portions 2 retain their lens-receiving grooves 10, and will continue to retain them after the portions 2 have been bent into lens-rim form.

This bending operation is performed at another time, as illustrated in Fig. 7, merely by coiling the rod about a suitably dimensioned mandrel 18, with the lens-receiving groove 10 upon the inner face thereof. Upon permitting the rod to become released by its own elasticity after such coiling, it will be found that the bridge 8 has become slightly bent, and the end portions have become bent approximately into rim form, the rims 2 being disposed entirely below the bridge 8, as viewed in Fig. 11.

Preferably before the coiling step, however, the rod is bent into S form at the junctions 20 and 22 between the bridge 8 and the rims 2, and the ends 12 and 14 are reversely bent, all as illustrated in Fig. 5.

The clips 4 are preferably applied at this time, also. Each clip 4 is carried by a clamp, having two oppositely disposed arms 24 and 26, as illustrated more particularly in Fig. 8. These arms are bent over against the exterior surface of the rod, from one side 28, completely around to the opposite side 30 of the groove 10,—though, as illustrated in Fig. 6, the arms of the clamp may be caused to enter into the groove, in those cases where they will not interfere with the proper seating of the lens 32, which is usually the case with sun goggles, the lenses of which do not require to be accurately seated. The arms 24 and 26 are shown in Fig. 6 in dotted lines to indicate their original position, before they have become bent around the rims 2. The clip 4 is cut out of the arm 26 thereby producing a slot 34 therein, as more particularly illustrated in Fig. 8.

After the lens 32, which is usually colored or darkened, has been inserted in the lens-ring groove 10 of the still open rim 2, as illustrated in Fig. 9, it is necessary to clamp the reversely bent free end 12 or 14 and the S-bent junction part 20 or 22 together, and to the corresponding end

of the bridge 8. This may be effected by means of a U-shaped clamp illustrated, in its original form, in Fig. 9. The U-shaped clamp is provided, at the sides of the U, with two oppositely disposed, central plates 36, a pair of oppositely disposed, end plates 38 on one side of the central plates 36, and a pair of similar, oppositely disposed, end plates 40 on the other side of the central plates 36. The reversely bent free end 12, the S-bent, junction portion 26, and the corresponding end of the bridge 8 are all received in this clamp, after which the end plates 38 are bent into clamping engagement with the reversely bent end 12, and the end plates 40 are bent into clamping engagement with the S-bent portion 26, as illustrated in Fig. 10. The central plates 36 become thus permanently superposed over the front and the rear of the points of junction between the bridge 8 and the rims, as is indicated by dotted lines in Fig. 10.

When the completed mounting is attached to a spectacle frame, as illustrated in Fig. 12, by means of the clips 4, it will be held in position by the resiliency of the bridge 8.

Modifications will readily occur to persons skilled in the art, and all such are considered to fall within the spirit and scope of the present invention as defined in the appended claims.

What is claimed is:

1. A one-piece, metal ophthalmic mounting comprising a central portion and two end portions integral therewith, the end portions being bent into rim shape, the mounting being bent into S form at the points of junction between the central portion and the end portions, the free ends of the end portions being reversely bent, and two clamps within one of which each reversely bent, free end and the corresponding, respective S-bent portion of the mounting are clamped to secure each reversely bent, free end to the corresponding S-bent portion and to the central portion, the end portions being each provided with an interior, lens-receiving groove, whereby the end portions constitute lens-receiving rims and the central portion constitutes a bridge.

2. An attachment for an ophthalmic mounting comprising a one-piece, metal member having a central spring portion and two end portions integral therewith, the end portions being bent into rim shape with the two rims disposed entirely below the central portion, the free ends of the end portions being respectively secured to the mounting at the points of junction between the central portion and the end portion, the end portions being each provided with an interior, lens-receiving groove of narrower width than the cross-sectional diameter of the end portions, and a plurality of clamps each having two oppositely disposed arms bent over against and around the exterior surface of one of the end portions from one side of the lens-receiving groove completely around to the other side of the lens-receiving groove to secure the clamps to the end portions, a clip being cut out of one of the arms of each clamp, thereby producing a slot in said one clamp arm, whereby the end portions constitute lens-receiving rims and the central portion constitutes a spring bridge, the mounting being adapted to be attached to an ophthalmic mounting by the clips and to be held thereon by the resiliency of the bridge.

3. A one-piece, metal, ophthalmic mounting comprising a continuous metal rod having a central portion and two end portions integral therewith and having in one face thereof a continuous, lens-receiving groove, the sides of the groove at the central portion of the rod being flattened out, whereby the said central portion constitutes a spring bridge, the free ends of the rod being also flattened out and reversely bent, the said end portions being bent into rim shape with the lens-receiving groove at the inner face thereof, the rod being bent into S form at the points of junction between the bridge and the said end portions, two U-shaped clamps each having at the sides of the U two oppositely disposed, central plates and a pair of oppositely disposed end plates on each side of the central plate, the reversely bent free ends and the corresponding S-bent portion being received in one of the clamps, the other reversely bent free end and the other corresponding S-bent portion being received in the other clamp, the said end plates being bent into clamping engagement with the reversely bent ends, the S-bent ends and the bridge, and the central plates being superposed over the front and the rear of the points of junction between the bridge and the end portions.

4. An ophthalmic mounting comprising a metal rod bent into the form of a split lens rim and having a lens-receiving groove, a free end of the rod at one side of the split being flattened out and reversely bent, the rod being bent into S form at the other side of the split, a U-shaped clamp having at the sides of the U two oppositely disposed, central plates and a pair of oppositely disposed end plates on each side of the central plate, the reversely bent free end and the S-bent portion being received in the clamp, the said end plates being bent into clamping engagement with the reversely bent end and the S-bent end, and the central plates being superposed over the split portion of the rim without bending.

JAMES W. WELSH.