No Model.)

D. T. METHVEN.

SPECTACLES.

No. 470,006. Patented Mar. 1, 1892.

Fig. 1.

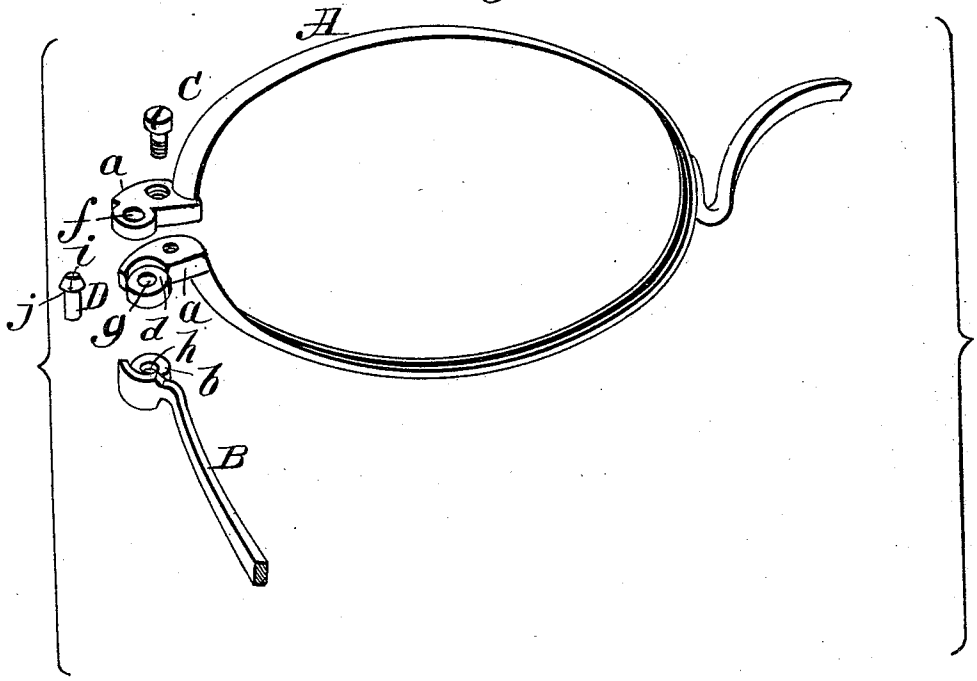


Fig. 2.

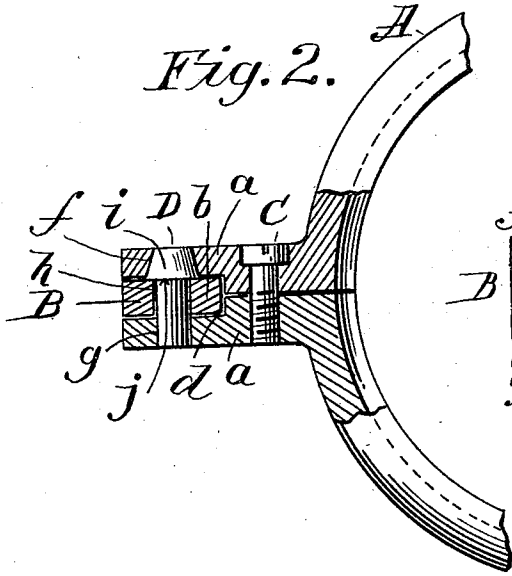
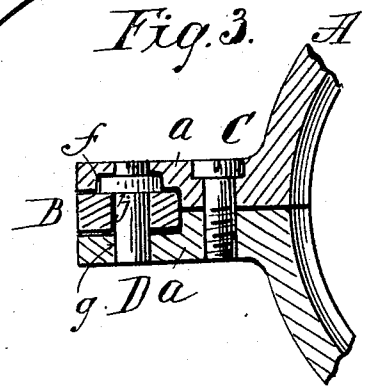


Fig. 3.



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SPECTACLES.

SPECIFICATION forming part of Letters Patent No. 470,006, dated March 1, 1892.

Application filed September 30, 1891. Serial No. 407,356. (No model.)

To all whom it may concern:

Be it known that I, DAVID T. METHVEN, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Spectacles, of which the following is a specification.

The object of the present invention relating to spectacles is to secure an improved form of pivotal connection or joint between the lugs or end pieces at the outer end of each eye-frame and the temple-arm, whereby no upsetting or riveting is necessary at the time of connecting the said parts, and, furthermore, whereby there will be no liability of the pivot-constituting pin working out of its place to permit the detachment of the temple-arm from the frame.

The invention consists of the formation or construction and combination of parts, all substantially as will hereinafter more fully appear, and be set forth in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is an enlarged perspective view of the joints constituting parts of the spectacles separated from each other. Fig. 2 is an enlarged sectional view through the jointed part of the spectacles. Fig. 3 is a sectional view showing a slight modification, to be referred to.

In the drawings, A represents the elliptical eye-frame, which has at the outer end thereof the parallel separable and angularly-extended lugs or ear pieces *a a*, which are termed "end pieces," and, as usual, the opposing inner faces of the end pieces are rabbeted, as at *d*, toward their outer ends for the reception in a compact manner of the tongue *b*, formed on the inner end of the usual temple-arm B. The end pieces have the aligned holes *f* and *g*, the one *f* of which is wider at the inner side of the end piece and the other hole *g* is of a diameter less than that of the widened orifice of the hole *f*. The temple-arm B also has transversely through its tongue the pivot-hole *h*, which also is of a diameter smaller than that of the widened orifice of the hole *f*.

D represents the pivot-pin for the joint, which at its one end portion is formed so as to lie within and be supported and held against endwise movement in the said inwardly-widened hole *f*. The pivot-pin is therefore preferably tapered, as at *i*, at its larger end portion. The pin has its middle and other end portion plain and of even diameter, smaller than the widest section of the tapered portion *i*, to fit the holes *h* and *g* in the temple-arm and in the other end piece, there being of course the shoulder *j*, the pin which is at the side of the temple arm toward the hole *f*.

C is the usual confining-screw for maintaining the end pieces in their proximate relations, the same passing through the end pieces inwardly from the pivot. The parts are assembled and connected before the screw C is applied and while the end pieces are sprung apart, the enlarged and tapered portion *i* being set into the widened or outwardly-tapered hole *f*, the drilled tongue of the temple-piece being then placed about the middle portion of the pin, and finally the end piece having the hole *g* is sprung to place about the end of the pin and the confinement of the parts made by the screw C. Plainly the pivot-pin D cannot work through the end piece which has the hole *f*, owing to the head of the pin, which is of greater area at its part that is located in the hole toward the inner face of the end piece, and the said pin cannot work endwise through the hole *g* in the other end piece, owing to the abutment of the shoulder *j* with the temple-arm.

In Fig. 3 a mere colorable departure from the precise form shown in Fig. 2 is illustrated, wherein the hole *f* through the one end piece, in lieu of being tapered, may be countersunk to secure the widening thereof at its inner end and the pivot-pin outside of the shoulder may be correspondingly formed; but clearly the one is the equivalent of the other form under the present invention, although, for obvious and practical reasons, the tapered formations first described and shown are to be preferred.

I claim—

1. In spectacles, the combination, with the eye-frame having the separable end pieces with aligned holes, one of which is widened at the inner side of the end piece and the other of a smaller diameter than said widened hole-orifice, of the temple-arm having a pivot-hole of a diameter also smaller than said orifice,

and the pivot-pin having its one end portion formed to lie within and to be held against endwise movement in said inwardly-widened hole and having its middle and other end portion to fit the holes in the temple-arm and in the other end piece with the shoulder at the side of the temple-arm, and independent means for confining the end pieces, substantially as described.

2. In spectacles, the combination, with the eye-frame having the separable end pieces *a a* with the aligned holes, one *f* of which is outwardly tapered and the other *g* of a smaller diameter than the inner orifice of the hole *f*, of the temple-arm having a pivot-hole *h* of a diameter smaller than that of said inner orifice and the pivot-pin having its one end portion outwardly tapered, as at *i*, and the shoulder next thereto and having the remainder thereof of a diameter to fit the holes *h* and *g*, and the screw C for uniting the end pieces inside of the pivotal connection, substantially as shown.

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