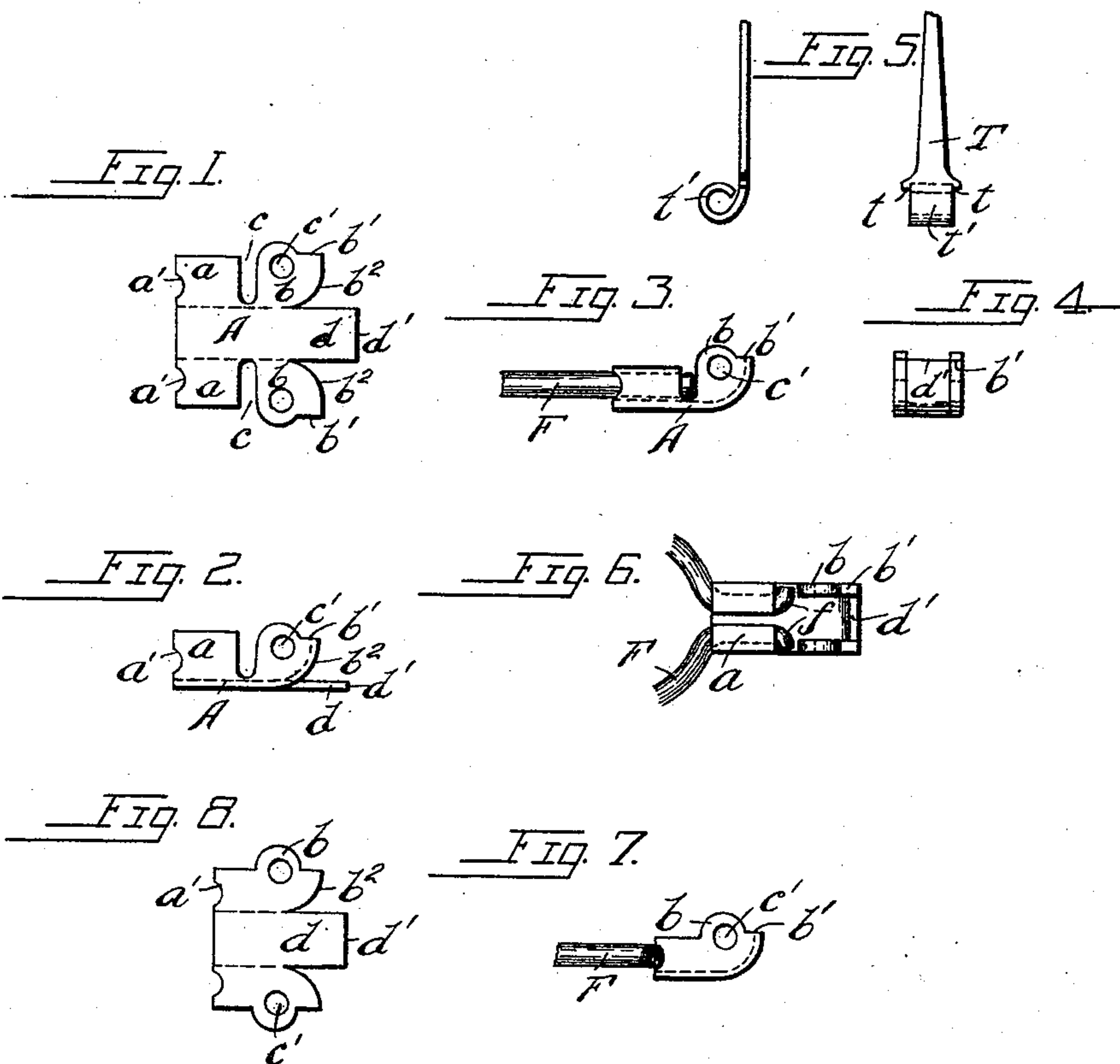


(No Model.)

T. A. WILLSON.  
SPECTACLES.

No. 452,009.

Patented May 12, 1891.



Witnesses

*E. A. Kelly*  
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# UNITED STATES PATENT OFFICE.

THOMAS A. WILLSON, OF READING, PENNSYLVANIA.

## SPECTACLES.

SPECIFICATION forming part of Letters Patent No. 452,009, dated May 12, 1891.

Application filed February 11, 1891. Serial No. 381,036. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS A. WILLSON, a citizen of the United States, residing at Reading, in the county of Berks, State of Pennsylvania, have invented certain Improvements in Spectacles, of which the following is a specification.

This invention relates to certain improvements in end pieces for spectacles, the main object of which is to provide an article that can be cheaply manufactured and will at the same time present a neat appearance and wear well. In a previous application filed January 8, 1891, Serial No. 377,182, I have described and illustrated a separate end piece formed with clamping and jointing ears and involving some of the features herein shown and described but not claimed.

The present invention is clearly set forth in connection with the accompanying drawings and in the following claims.

Figure 1 represents the sheet-metal blank from which my end piece is formed. Fig. 2 is a side elevation of the end piece with the ears bent up, but with the tongue unbent. Fig. 3 is a similar view showing the end piece clamped to the eye-wires and the tongue bent up to complete the finish. Fig. 4 is an end view of the same. Fig. 5 shows views of a temple with which the end piece is adapted to be used. Fig. 6 is a plan view of my end piece clamped to the eye-wires, and Fig. 7 is a view showing a slightly modified form soldered thereto. Fig. 8 shows a blank corresponding with Fig. 7.

The end piece A, the blank for which is shown in Fig. 1, is formed with clamping-ears *a a*, having recesses *a' a'* for the eye-wires F, and with jointing-ears *b b*, separated from the clamping-ears by slots *c c*. It corresponds in these respects with the construction shown in my previous application already referred to. The jointing-ears *b b*, however, are in the present case formed with abutments *b' b'* and with curved lines *b<sup>2</sup> b<sup>2</sup>*, forming about a quarter-circle around the pivoting center *c'* and joining at acute angles the tongue *d*, which is located between and extends beyond the ears. The length of this tongue is such that when the jointing-ears are bent up parallel with each other, as in Fig. 2, it will be sufficient to bend upward between the

ears to a curve corresponding with the curved lines *b<sup>2</sup> b<sup>2</sup>*, as in Fig. 3, and to bring its end *d'* on line with the abutments *b' b'*. The temple T (shown in two views in Fig. 5) is a well-known form, which may be used very conveniently with the end piece just described. The shoulders *t t* will rest upon the abutments *b'* with the eye *t'* between the ears *b b*.

In Figs. 3 and 6 my joint-piece is shown secured to the bent ends *f f* of the eye-wires F by means of the clamping-ears *a a*, which are bent over them, as shown. The manner of securing it, however, forms no part of this invention, and in Fig. 7 I have shown the ears *a a* arranged not to serve as clamping-ears, but merely as a means of securing the end piece solidly to the eye-wires F by soldering. Fig. 8 shows the blank slightly changed at its attaching end, so as to form this modified construction. In both cases the end finish of the piece is substantially the same as though it were cut out of a solid piece instead of being formed from sheet metal.

What I claim is—

1. A sheet-metal end piece for a spectacle-frame, having jointing-ears bent parallel with each other, and a tongue of the same width as the space between said ears curved upward between them to form a flush end finish, substantially as set forth.

2. A sheet-metal end piece for a spectacle-frame, having jointing-ears bent parallel with each other and formed with abutments *b'*, and a tongue of the same width as the space between said ears curved upward between them to form a flush end finish and having its top edge on line with said abutments, substantially as set forth.

3. A sheet-metal blank A for a spectacle end piece formed with a clamping or soldering end and with opposite ears having curved lines *b<sup>2</sup>* and abutments *b'*, and an intermediate tongue *d* of the same length as said curved lines, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS A. WILLSON.

Witnesses:

F. PIERCE HUMMEL,  
GUS. M. STRICK.