

(Model.)

I. B. KLEINERT.
EAR MUFF.

No. 503,703.

Patented Aug. 22, 1893.

Fig. 1.

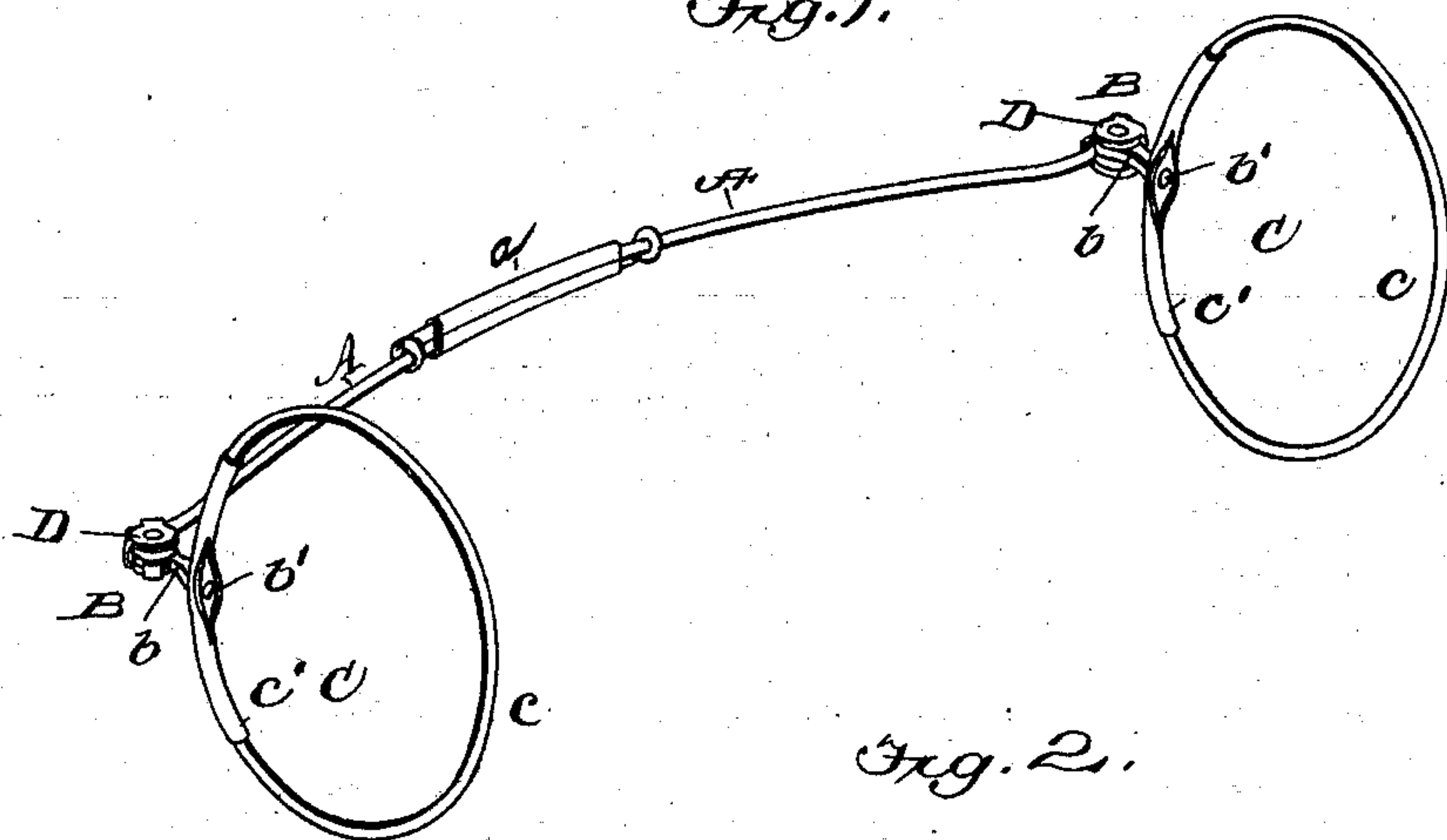


Fig. 2.

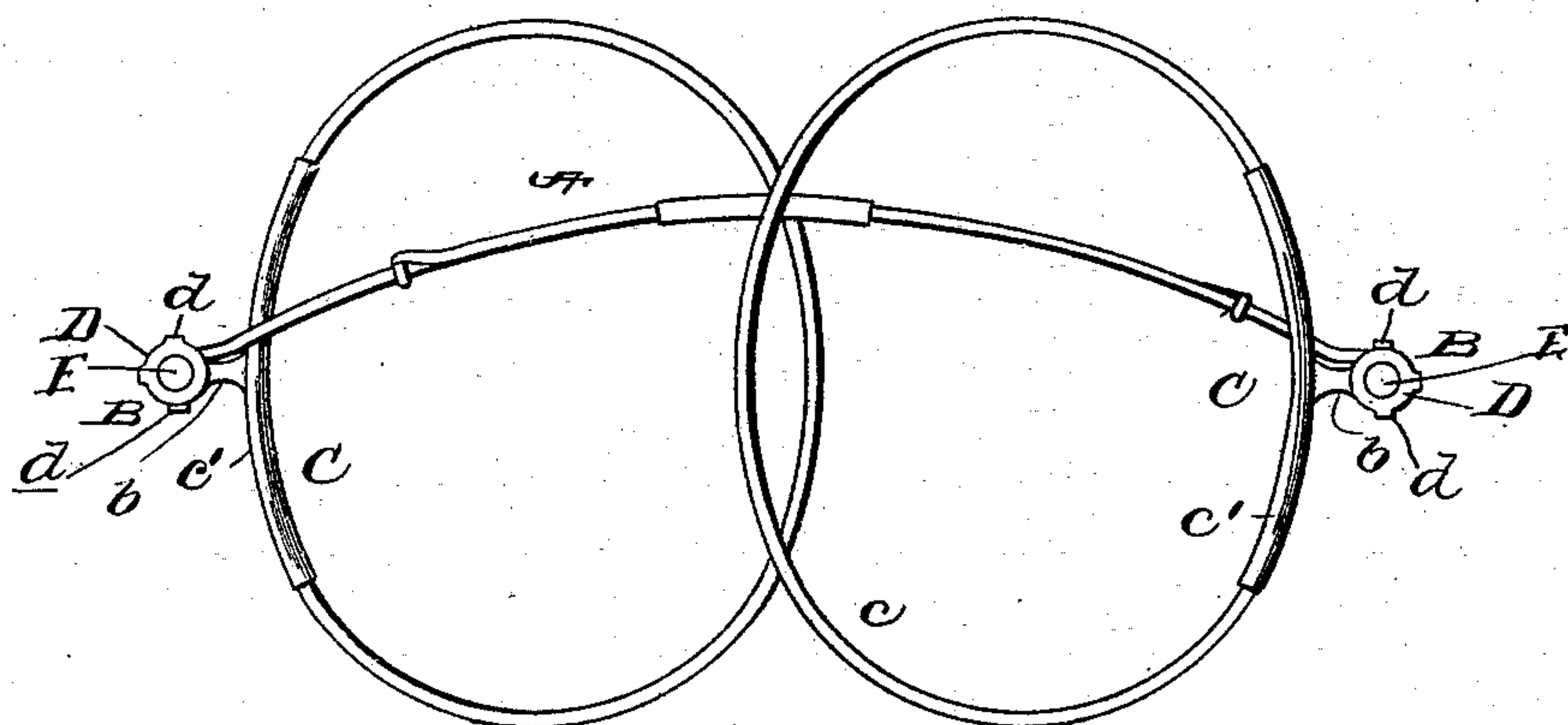


Fig. 3.

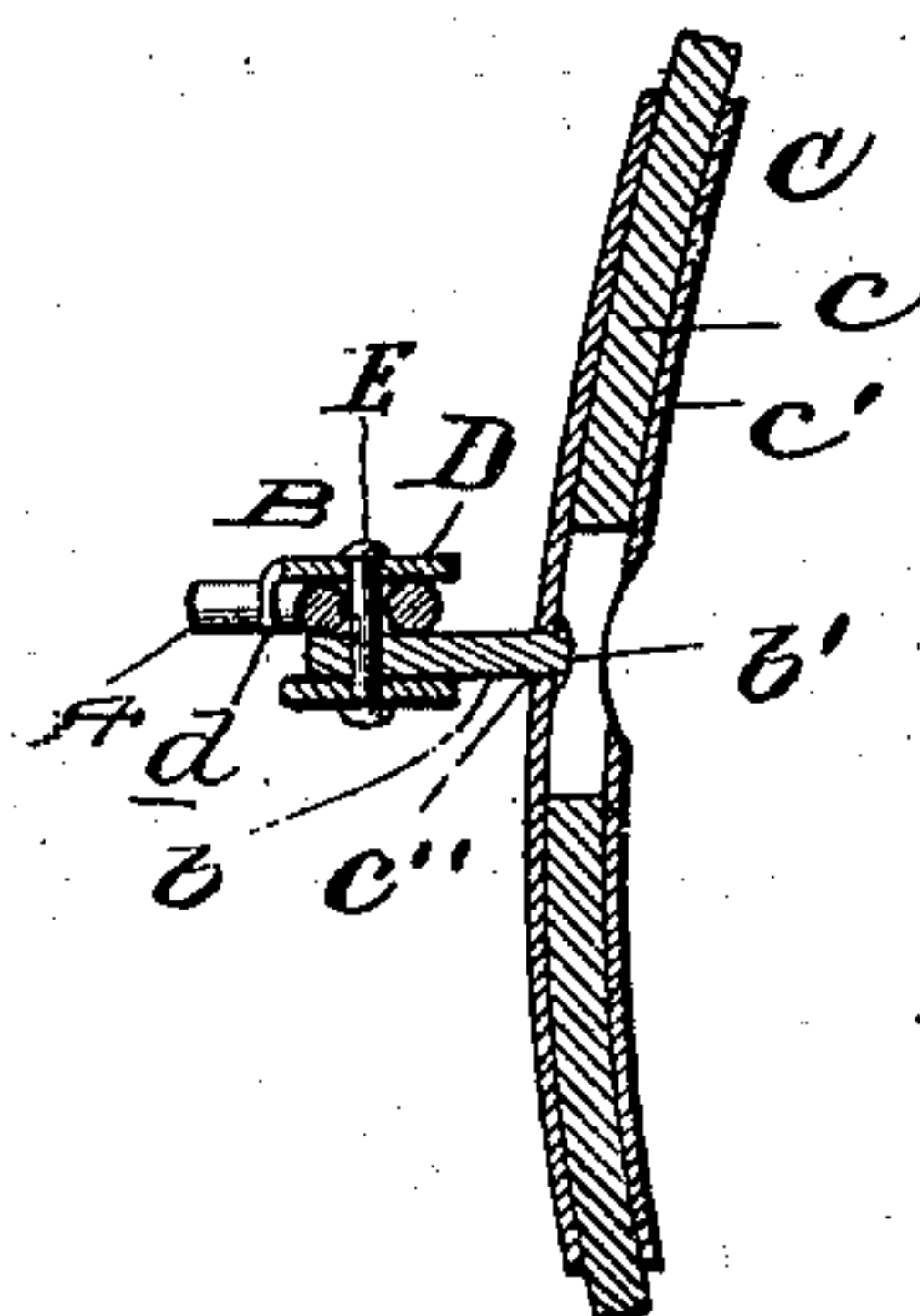
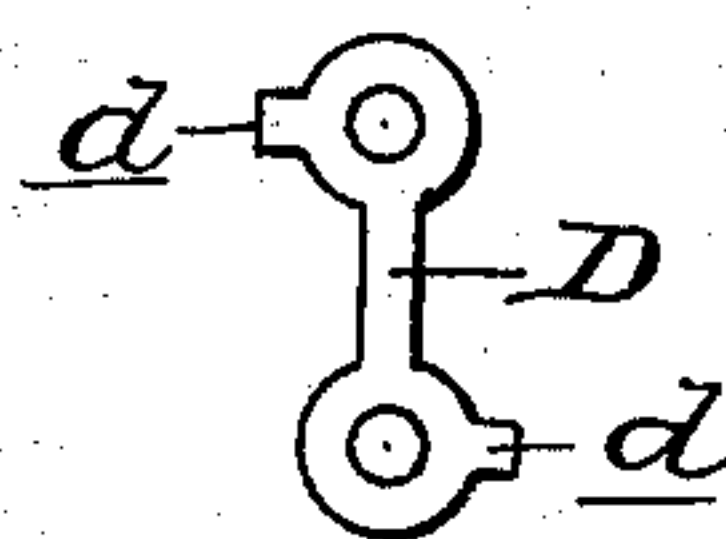


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

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EAR-MUFF.

SPECIFICATION forming part of Letters Patent No. 503,703, dated August 22, 1893.

Application filed November 10, 1892. Serial No. 451,494. (Model.)

To all whom it may concern:

Be it known that I, ISAAC B. KLEINERT, a citizen of the United States of America, residing at New York city, in the county and State of New York, have invented certain new and useful Improvements in Ear-Muffs, of which the following is a specification, reference being had therein to the accompanying drawings.

This improvement is designed to provide an ear muff of that class in which the parts are intended to fold into a small compass, and the invention consists in the peculiar construction, arrangement and combinations of parts hereinafter more particularly described and then definitely claimed.

In the accompanying drawings—Figure 1 is a perspective view of the metal parts of a pair of ear muffs constructed according to my improvement and shown extended. Fig. 2 is a plan of the same when folded. Fig. 3 is an enlarged view of one of the ear frames, partly broken away. Fig. 4 is a plan of a blank which, when bent to proper shape, forms part of a hinge connecting an ear frame to the head frame.

Referring now to the details of the drawings by letter—A A indicate two wires sliding in a tube *a*, forming the head frame or bow. The inner ends of the wires are bent into loops so as to embrace each other and the outer end of each is also bent into a loop and so as to form one section of a stop hinge B, as shown in the United States Patent No. 381,559.

C is the ear frame, consisting of a wire *c* bent into an oval shape and having its ends set into a curved tube *c'* whose center is opened and provided with a hole *c''* to receive a pivot *b'* formed on the outer end of the eye *b*, which is journaled on pintle E of the stop

hinge B, said eye piece being so constructed and arranged that it swings on said pintle E and forms a swivel connection with the tube *c'*. The eye *b* and wire A are held in position by a clasp D formed of sheet metal of the form shown in Fig. 4, which is bent up so as to embrace said eye and wire, and the three pieces are held together by the pintle E which goes through all three. The lugs *d d* form stops for the wire and eye, as fully set forth in the aforesaid patent. By this arrangement the ear frames can be folded so as to lie flat and in line with the head-frame, as shown in Fig. 2, thus taking up the minimum of room, or can be readily opened so as to stand at an angle thereto as shown in Fig. 1.

The curved tube may be either made of drawn tube or it may be made of sheet metal bent up to the required shape; or it may be made in any other desired way.

What I claim as new is—

1. The combination with an ear muff head frame, of a hinge at each end, eyes forming parts of said hinges and ear frames swiveled on the outer end of said eyes, substantially as described.

2. In combination with an ear-muff head frame having loops at each end, eyes *b* having pivots *b'*, and hinged to the head frame by pintles E, tubes *c'* swiveled on the pivots *b'*, and the wires *c*, having their opposite ends connected to the tube, all substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 9th day of November, 1892.

ISAAC B. KLEINERT.

Witnesses:

S. GUINZBURG,
B. REIS.