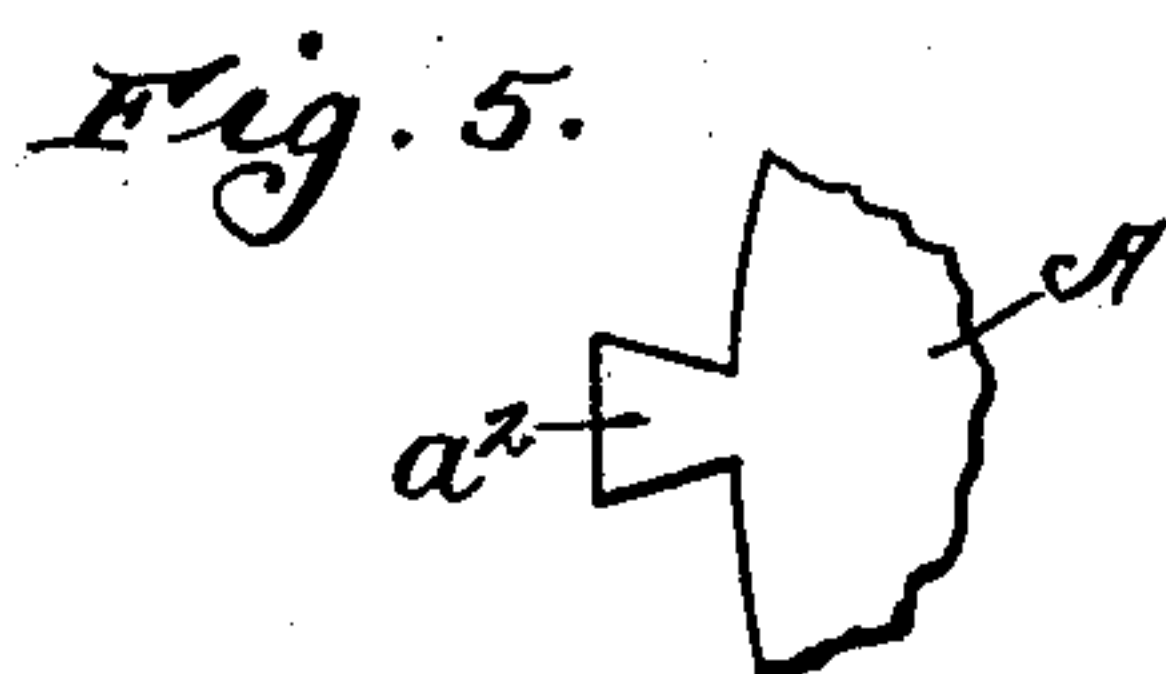
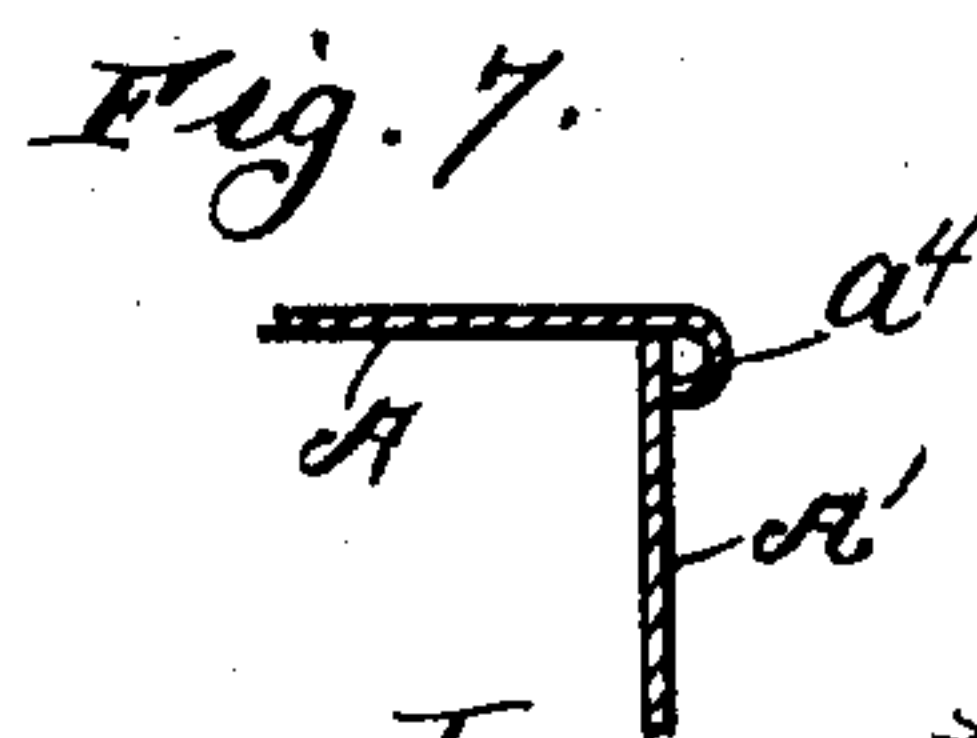
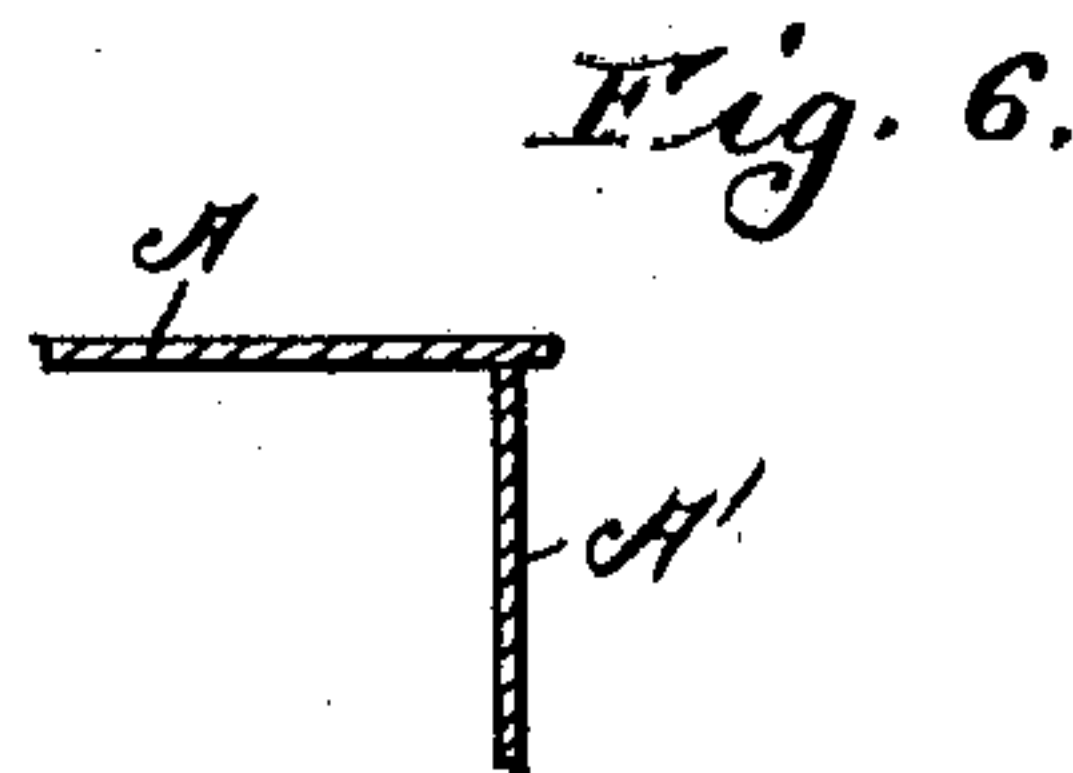
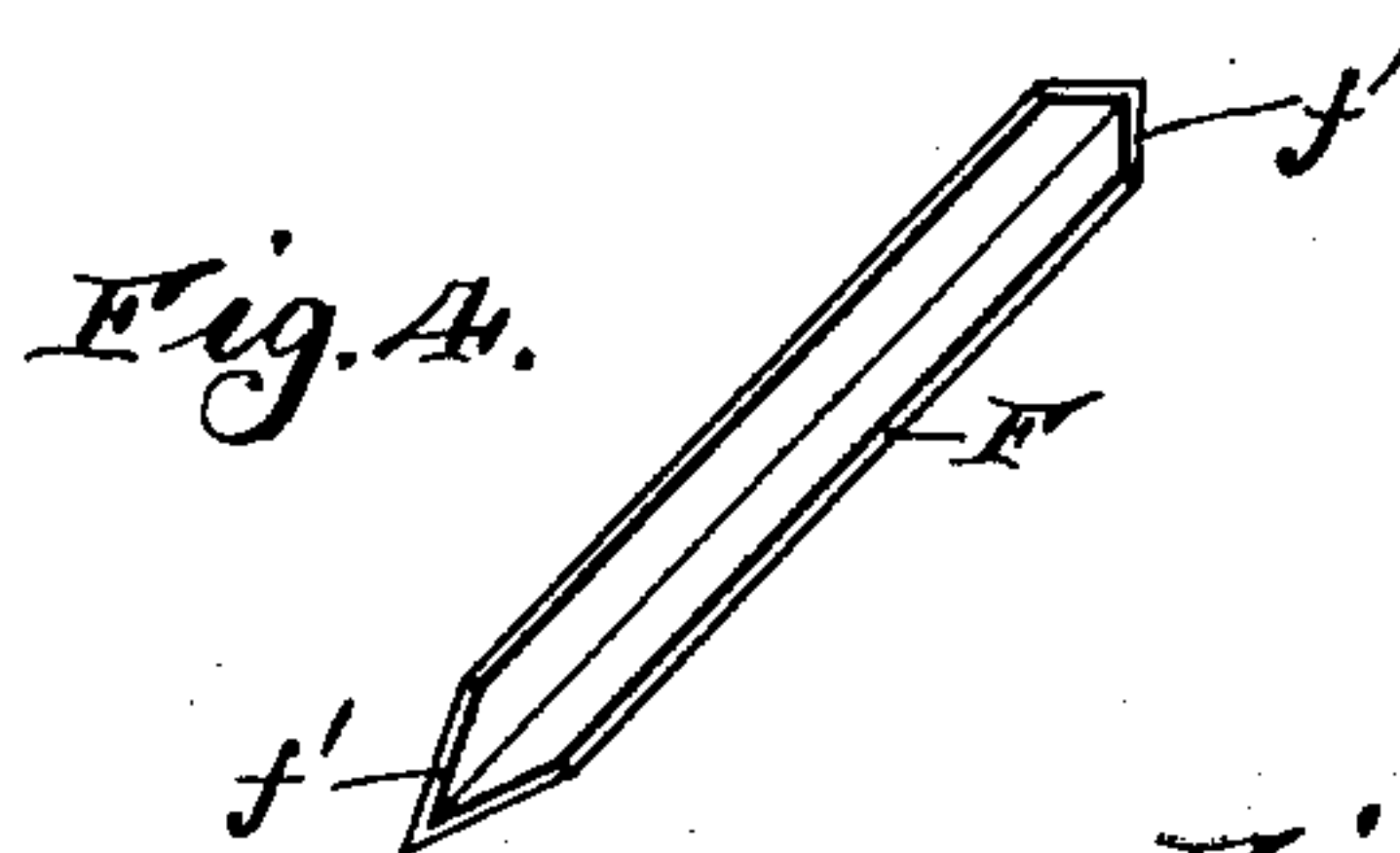
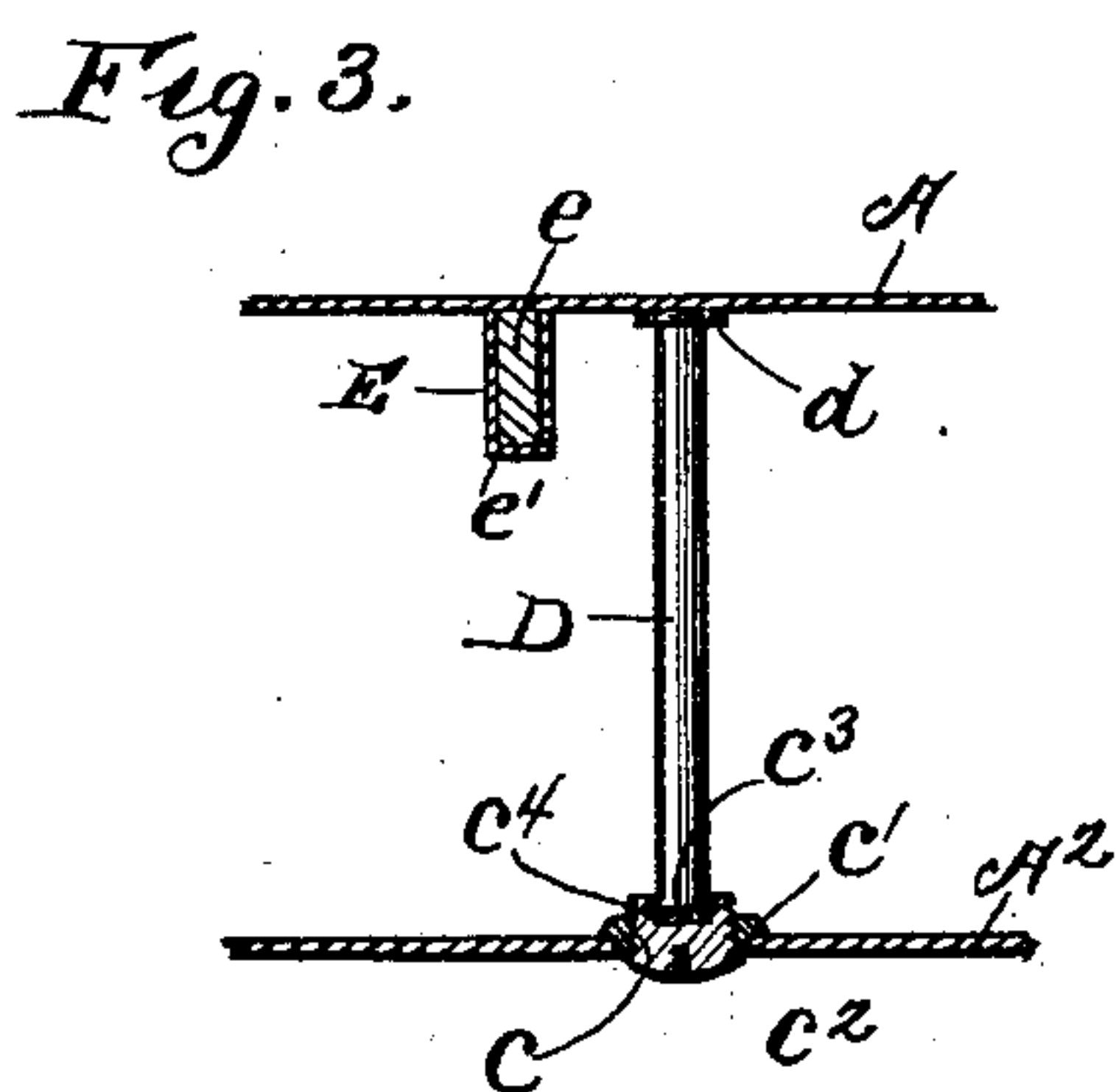
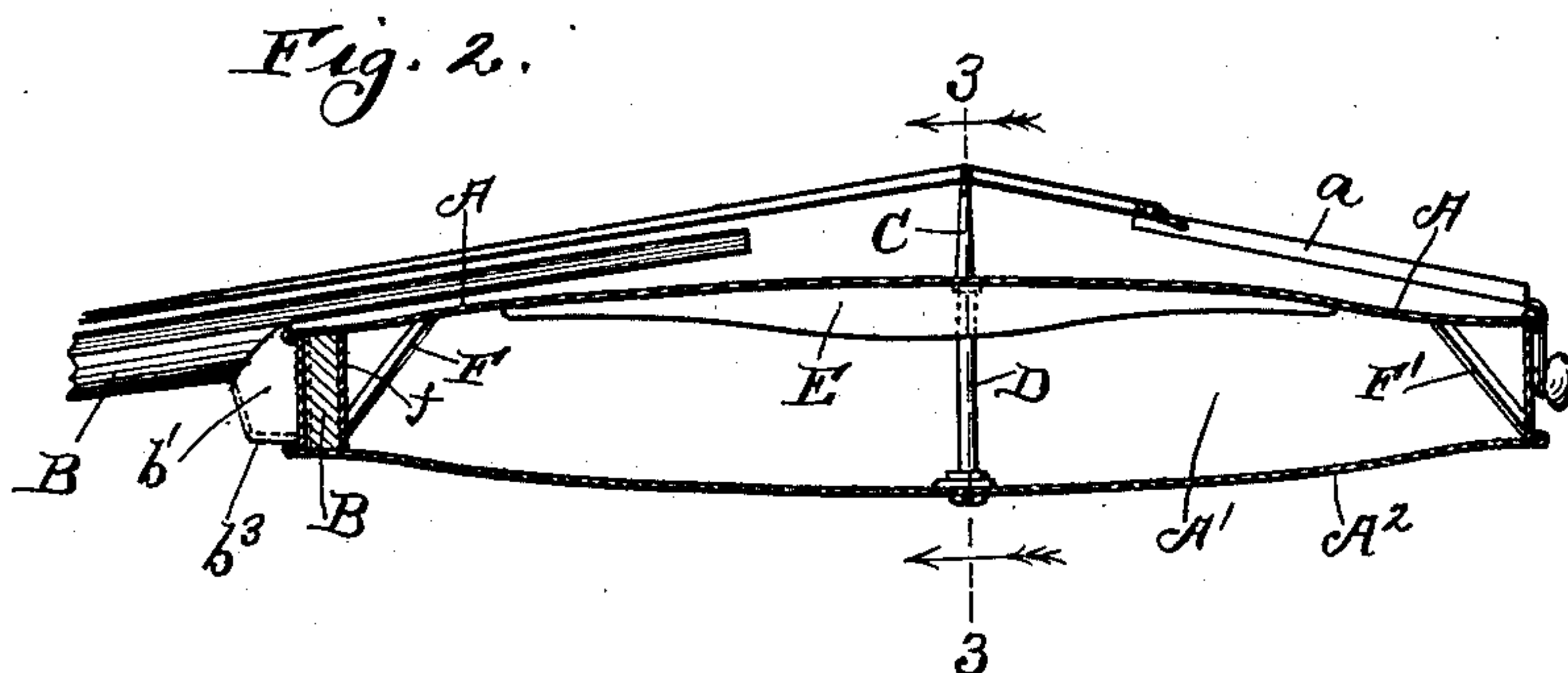
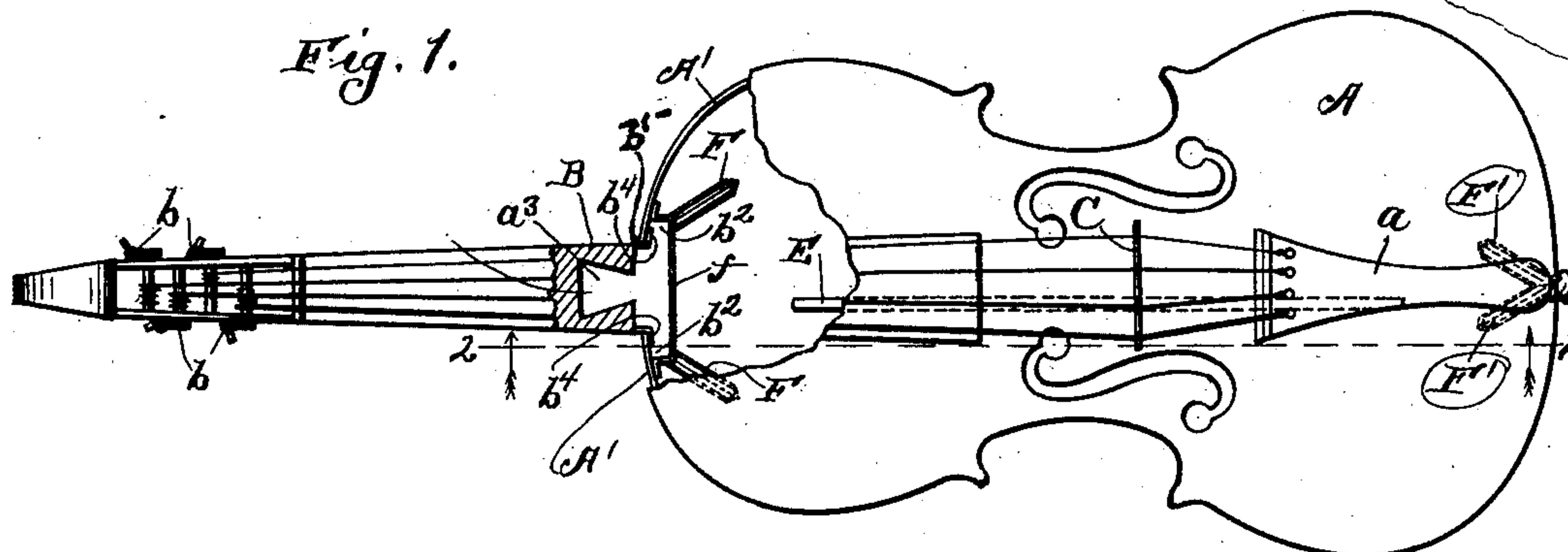


(No Model.)

G. P. MONSON.  
VIOLIN.

No. 547,150.

Patented Oct. 1, 1895.



Witnesses:  
W. J. Jacker,  
C. A. Duggan.

Inventor:  
Gustave P. Mouson  
By Chas C. Kilman Atty.



# UNITED STATES PATENT OFFICE.

GUSTAVE P. MONSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO HERMAN T. MONSON, OF SAME PLACE.

## VIOLIN.

SPECIFICATION forming part of Letters Patent No. 547,150, dated October 1, 1895.

Application filed May 8, 1895. Serial No. 548,531. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAVE P. MONSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Violins, of which the following is a specification.

This invention relates to improvements in musical instruments, and while it is more especially adapted to be embodied and used in violins, yet it is also applicable to analogous instruments; and it consists in certain peculiarities of construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The objects of my invention are, first, to provide a violin which shall be simple and inexpensive in construction, strong and durable, attractive in appearance, and possessing a good tone and resonant qualities; second, such a violin, which by reason of the material of which it is constructed and the peculiar arrangement of its parts, will yield harmonious strains in clear and pure tones without harsh notes, grating or jarring sounds; third, a violin the body of which is so braced and supported as to render it more durable than ordinarily, and in such a manner as to prevent any depression of the top of the instrument by reason of the tension of the strings on the bridge, and, fourth, to provide an adjustable brace or support for the top of the body, which may be readily adjusted from the exterior of the instrument.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a plan view of a violin embodying my invention, showing a part broken away in order to illustrate the manner of connecting the neck and body and of bracing the latter. Fig. 2 is a longitudinal sectional view taken on line 2 2 of Fig. 1. Fig. 3 is a cross-sectional view of a portion of the body of the instrument, showing the adjustable supporting-post and the longitudinal cleat or strengthening-piece secured to the lower surface of the top of the instrument.

Fig. 4 is a detail perspective view of one of the brace-pieces used at the ends of the body of the violin. Fig. 5 is a detail plan view of a portion of the top of the instrument. Fig. 6 is a sectional view of a part of the top and one of the sides of the body, showing one method of securing the same together; and Fig. 7 is a similar view of like parts, showing another manner of connecting them.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the top of the body of the violin, which body is of the ordinary or any preferred shape or form, but usually of the form illustrated in Fig. 1 of the drawings.

The instrument is provided, as usual, with a tailpiece *a*, which is secured to the body in any desired manner, and with the neck B, having the keys *b* for regulating the tension of the strings. The top A, sides A', and bottom A<sup>2</sup>, composing the body, are made of sheet metal, and preferably of brass, the side pieces A' being soldered or brazed to the adjacent surface of the top and bottom, near their edges, thus forming a close sounding box or body. The bottom A<sup>2</sup> of the body is provided, at a point directly beneath the bridge C when it is in position, with the opening *c*, into which is fitted the screw-threaded collar *c'* for the reception and retention of a screw *c*<sup>2</sup>, which is provided in its upper part with a socket or depression *c*<sup>3</sup>, in which is placed a small piece of felt *c*<sup>4</sup>, leather, or other yielding substance, upon which will rest the supporting-post D, which is provided at its top with a cap or piece *d* of leather, felt, or other similar material, and which rests against the inner surface of the top A just below the treble side of the bridge.

As shown in Fig. 3 of the drawings, the post is inserted within the socket *c*<sup>3</sup> of the screw *c*<sup>2</sup> and rests on the cushion or piece *c*<sup>4</sup>, and its top, provided with the cap or piece *d*, supports the top of the body. The pieces *d* and *c*<sup>4</sup> being made of felt, leather, or other material of a soft nature, will prevent any grating or harsh sounds in the vibrations of the strings, as would occur if said pieces were not used. The post D may be slightly inclined in any direction, and may be raised or lowered, as is obvious, by means of the screw *c*<sup>2</sup>, the exposed portion of which is about flush with the lower



surface of the bottom of the body. Extending longitudinally with the body, and on the inner surface of the top A, is secured a strengthening cleat E, which is made of a piece of wood  $e$ , resting at its upper part against the top A and the piece of metal  $e'$  which surrounds the sides and bottom of the wooden piece  $e$  and is soldered or brazed to the inner surface of the top.

The cleat E, constructed as above described, not only serves to strengthen the top, but I have found by experiment and practice that the wooden piece resting against the top A produces a beneficial result in the tone of the instrument, in that the notes are relieved of all objectionable metallic sound. This cleat is usually located under the base side of the bridge.

The neck B is made of wood, and is provided at its inner lower portion with an enlargement  $b'$ , having lateral shoulders  $b^2$  to engage with the inner surface of the side pieces A' of the body, as is clearly shown in Fig. 1 of the drawings. The lower portion of the enlargement  $b'$  is provided with a metallic covering  $b^3$ , which has flanges  $b^4$  on each of its sides to engage the inner surface of the side pieces of the body, which side pieces are provided at their front end with an opening  $b^5$  for the insertion of the neck. Around the inner end of the neck-piece is placed a piece  $f$ , which is secured at each of its ends to the sides of the body by means of solder or otherwise.

The front part of the body is provided with brace-pieces F, which are angular in cross-section and have their ends cut away or beveled, as at  $f'$ , in order that they may rest against the inner surface of the top and the corners of the piece  $f$ , to which they are secured by means of solder in an inclined position, as shown in Figs. 1 and 2. The rear end of the body is likewise provided with brace-pieces F', which are substantially of the same construction and are secured in a like manner as above described, except that the lower ends of the brace-pieces F' are united and rest on the bottom of the body, while the upper ends diverge and are secured to the top. This manner of bracing the instrument is found to be very advantageous for the reason that the tension of the strings on the neck and tailpiece have a tendency to cause the top to collapse or be depressed. The front part of the top is provided with a dovetail tenon  $a^2$ , which is designed to fit within a dovetail groove  $a^3$  in the neck, and thus firmly unite the two parts. The top and bot-

tom pieces of the body are sometimes bent over, as at  $a^4$  in Fig. 7, to form a bead and render the general appearance of the instrument more like a wooden one.

The opening  $b^5$  in the end of the body is for the reception of the neck B, which is inserted in said opening before the top A is secured to the side pieces A'. The top of the neck, or that portion thereof adjacent to the body of the violin, is provided with a dovetail recess  $a^3$ , into which is fitted the dovetail tenon  $a^2$  of the top after the neck has been secured in position in the opening  $b^5$ , as before stated.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with the body, of the internal brace-pieces F, angular in cross-section and provided with beveled ends and secured in an inclined position in the front part of the body, the brace-pieces F', provided with beveled ends and angular in cross-section and secured in an inclined position at the rear of the body, and with their lower ends together on the bottom of the body and their upper ends apart on the top of the body, substantially as described.

2. The combination with the body, of the angular brace-pieces F, secured in an inclined position in the front of the body, the angular brace-pieces F', secured in an inclined position at the rear of the body, a socketed-screw seated in the bottom of the body, and a supporting post provided with covered ends and standing in said socket, and a wooden cleat secured longitudinally on the lower surface of the top of the body, and having a metallic covering around the sides and bottom thereof, substantially as described.

3. The combination with the body, of the wooden cleat  $e$ , secured longitudinally and having the metallic covering  $e'$ , around its sides and bottom and soldered to the inner surface of the top of the body, substantially as described.

4. The combination of the body, having an opening  $b^5$ , in its front end, for the reception of the neck B, with said neck having the enlarged portion  $b'$ , provided with the shoulders  $b^2$ , and the metallic covering  $b^3$ , having the flanges  $b^4$ , to engage the body, and the inner brace-pieces F, F', located at each end of the body, all constructed, arranged and operating substantially as and for the purpose set forth.

GUSTAVE P. MONSON.

Witnesses:

CHAS. C. TILLMAN,  
E. A. DUGGAN.