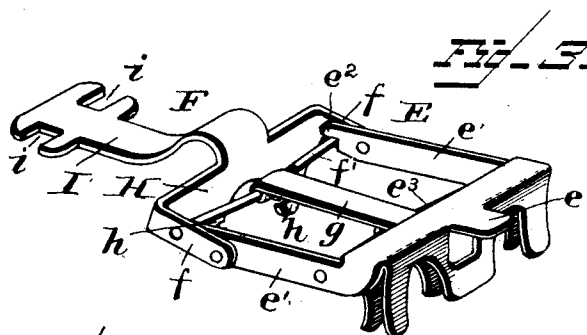
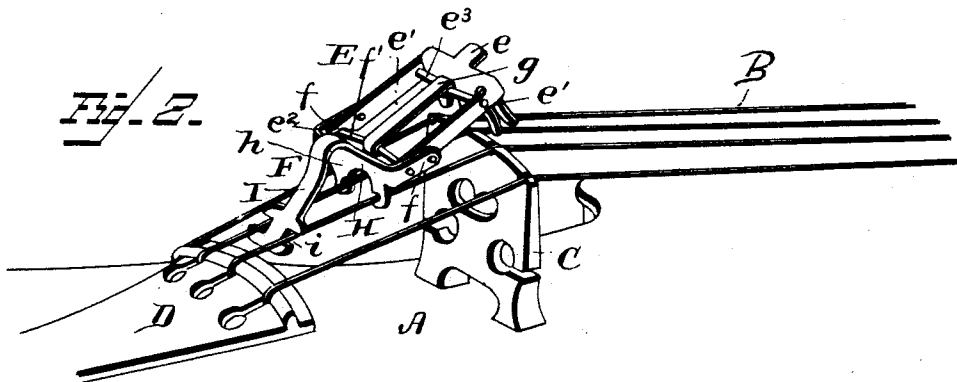
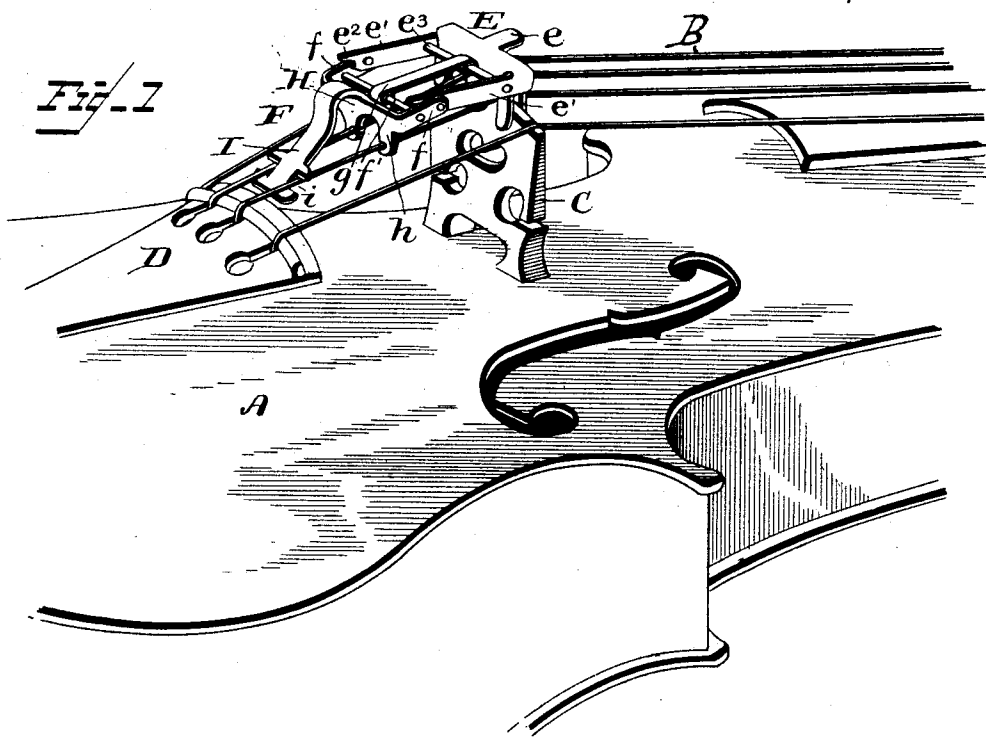


(No Model.)

H. W. HOEFT.
VIOLIN MUTE.

No. 516,093.

Patented Mar. 6, 1894.



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UNITED STATES PATENT OFFICE.

HERMANN WILLIAM HOEFT, OF LA CROSSE, WISCONSIN.

VIOLIN-MUTE.

SPECIFICATION forming part of Letters Patent No. 516,093, dated March 6, 1894.

Application filed May 29, 1893. Serial No. 475,908. (No model.)

To all whom it may concern:

Be it known that I, HERMANN WILLIAM HOEFT, a citizen of the United States, residing at La Crosse, in the county of La Crosse, State of Wisconsin, have invented certain new and useful Improvements in Violin-Mutes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to mutes or tone modulating devices for violins or similar stringed musical instruments.

The primary object of the invention is the provision of a device for the purpose aforesaid which can be readily applied to or detached from an instrument at a moment's notice, and which when in position can be instantly operated to damp the tone or thrown up so as not to interfere with the natural tone of the instrument as required.

A further object of the invention is the provision of a modulating device which can be applied to the instrument without being attached to any of the fixed parts as the tail piece or body of the instrument thereby not reducing or interfering with the vibratory qualities of the instrument, the device being attached to the hitch sections of the musical strings so as to be readily detached therefrom at a moment's notice.

The improvement consists of the novel features and the peculiar construction and combination of the parts which will be hereinafter more fully described and claimed and which are shown in the annexed drawings, in which—

Figure 1 is a perspective view showing the application of the invention to a violin and in position to damp the tone. Fig. 2 is a view similar to Fig. 1 showing the damping device thrown up so as not to interfere with the natural tone of the instrument. Fig. 3 is a perspective view of the device detached from the instrument and shown on a larger scale.

The invention is applicable to all varieties of stringed musical instruments in which the strings pass over a bridge and in which the tone is susceptible of modulation by the application of the mute device to the said bridge.

As the device will be more generally used in connection with violins it is shown applied to this class of instruments, the violin A being of usual construction and strung in the ordinary manner, the strings B passing over the bridge C and attached at one end to the apron or tail piece D and at the other end to the tuning pegs in the well known way.

The mute device E is constructed of light sheet metal and formed so as to straddle and embrace the sides of the bridge C, and is provided with a finger piece *e* by means of which the operation of the device is facilitated. This finger piece *e* is cut from the piece forming the mute and the lower edge of the latter is notched to clear the strings when the device is in operative position before damping the tone, as shown most clearly in Fig. 1. Arms *e'* project from the opposite ends of the mute E and extend in parallel relation in the same directions and are pivotally connected to corresponding arms or bent ends *f* of an anchor frame F, the ends of the arms *e'* being extended and reduced to form projections *e³* which engage with a cross bar *f'* and limit the upward movement of the said mute E relative to the anchor frame F. The cross bar *f'* is a spring wire which is secured at its ends to the arms or bent ends *f* and brace the latter. A corresponding cross bar of spring wire *e³* is attached at its ends to the arms *e'* close to the mute E. A link *g* is pivotally connected at its ends to the cross bars *f'* and *e³*. This link corresponds in length to the distance between the cross bars *f'* and *e³* when the mute and anchor frame are in the positions shown in Fig. 1. When the mute E is thrown up out of engagement with the bridge, as shown in Fig. 2, the cross bars *f'* and *e³* are deflected toward each other at their middle point due to the straining of the link *g* which is slightly shorter than the distance between the cross bars *f'* and *e³* when the ends of the same are in the same straight line with the pivotal connection between the arms *e'* and *f*. The tension on the link *g* and the cross bars *f'* and *e³* holds the mute E out of engagement with the bridge and strings and when the mute E is struck sharply by the finger the said tension on the parts *f' g* and *e³* assists in throwing the mute into an oper-

ative position because the strings are on opposite points of the pivotal connection between the two sets of arms *f* and *e'*.

The anchor frame, like the mute and arms *e'*, is formed of light sheet metal and comprises a cross piece *H* having the arms *f* at its ends formed preferably by bending a portion near each end at right angles, and a shank *I* which has its outer end expanded and provided in its edges with notches *i* to receive the strings of the instrument as shown most clearly in Figs. 1 and 2. The cross piece *H* is provided at its lower edge with projections *h* which are notched on their inner edges to receive the same strings which are seated in the notches *i* of the shank. The shank is designed to come between the two strings whereas the projections *h* straddle or embrace the said strings and prevent spreading and insure a firm connection of the device with the strings.

The mute *E* having the arms *e'* is formed from a single piece of sheet metal, and the anchor frame comprising the part *H*, *f* and *I* is also formed from a single piece of sheet metal, the blanks being stamped from the sheet material by any of the well known processes and bent in the form shown. While light sheet metal is preferred, it is obvious that other material suitable for the purpose such as celluloid or any of the pyroxyline compounds may be employed.

The device is applied to the hitch sections of the musical strings by passing the shank portion between two of the strings and turning it slightly so as to engage the notches *i* thereof with two of the strings. The cross piece *H* is depressed and the strings pressed together sufficiently far to clear the projection *h* which are released as shown as the notches in the said projections come opposite the said strings, the latter regaining a normal position and springing into the notches in the said projections. When the tone is not to be damped the mute *i* is thrown up in the position shown in Fig. 2 and when it is required to modulate the tone the mute is depressed and straddles the bridge as shown in Fig. 1.

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

1. A tone modulator for violins and similar stringed musical instruments comprising an anchoring frame to be attached to the hitch section of the musical strings, and a mute having arms by which it is pivotally connected

to the said anchor frame so as to be moved to and from the bridge, and a tension mechanism to hold the mute in either of its two positions, substantially as described for the purpose set forth.

2. A tone modulator for violins and similar stringed musical instruments comprising an anchoring frame having arms *f*, a mute having arms *e'* which are pivotally connected to the arms *f* so as to have a limited movement, and a tension device connecting the two sets of arms on opposite sides of the pivotal connection, substantially as described for the purpose specified.

3. A tone modulator for violins and similar stringed musical instruments consisting of an anchor frame having arms *f*, a mute having arms *e'* which are pivotally connected with the said arms *f* and which are extended beyond said pivotal connections to form stops *e²*, spring cross bars *f'*, *e³* connecting the arms *f* and *e'*, respectively, and a link of slightly less length than the distance between the cross bars *f'* and *e³* when the same are in a straight line with the pivotal connections between the two sets of arms, said links connecting the cross bars *f'* and *e³* at their middle points, substantially as set forth.

4. In a tone modulator for violins and similar stringed musical instruments, an anchor frame to be attached to the hitch sections of the musical strings comprising a cross piece having depending notched arms to engage with the said hitch section, and having a shank portion which is provided in its edges with notches, and a mute connected with the said anchor frame and adapted to be moved to and from the bridge of the instrument, substantially as set forth.

5. In a tone modulator for violins and similar musical instruments, an anchor frame to be attached to the hitch sections of the musical strings comprising a shank having notches in its edges to receive the strings, and having depending projections to straddle and embrace the said strings and provided in their inner edges or opposing sides with notches to receive the said strings, and a mute connected with the anchor frame and adapted to be moved to and from the bridge, substantially as set forth.

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

HERMANN WILLIAM HOEFT.

Witnesses:

JOHN J. ESCH,
WALTER C. WINTER.