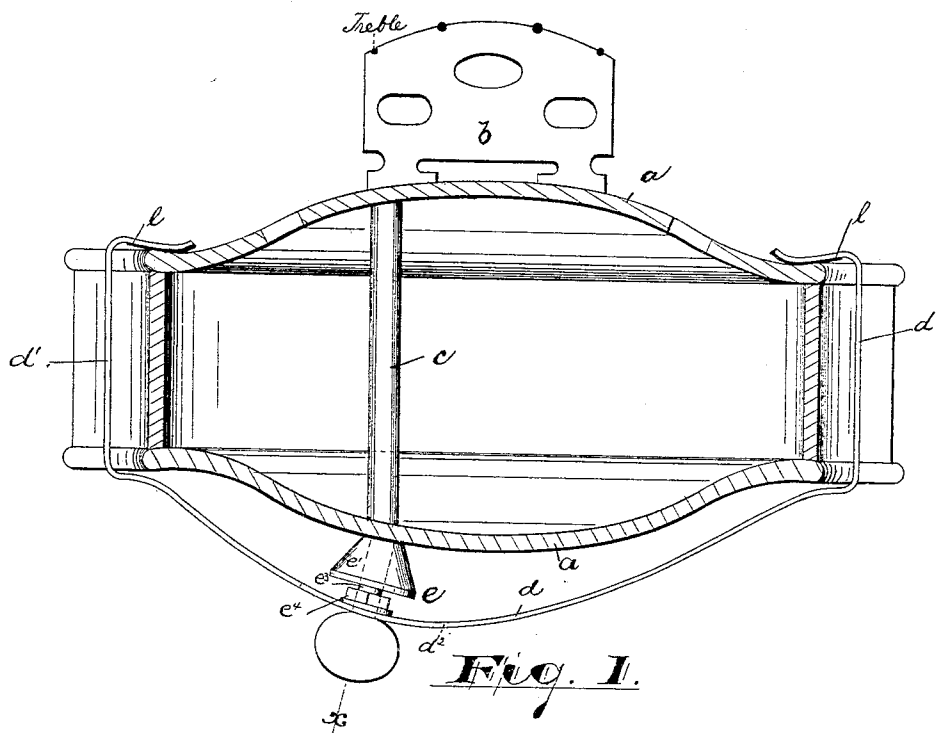


(No Model.)

C. C. KROPP.
VIOLIN.

No. 494,276.

Patented Mar. 28, 1893.



UNITED STATES PATENT OFFICE.

CHARLES CLEMENTS KROPP, OF NEWARK, NEW JERSEY.

VIOLIN.

SPECIFICATION forming part of Letters Patent No. 494,276, dated March 28, 1893.

Application filed August 4, 1892. Serial No. 442,106. (No model.)

To all whom it may concern:

Be it known that I, CHARLES CLEMENTS KROPP, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Violins and Similar Musical Instruments; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to heighten the power and improve the quality of tone of violins, violoncellos and viols and similar instruments and it consists in the arrangements and combinations of parts substantially as will be hereinafter set forth and finally embodied in the clauses of the claim.

Referring to the accompanying drawings in which like letters indicate corresponding parts in each of the figures, Figure 1 is a sectional view of the body of a violin to which the improvement has been applied. Fig. 2 is a plan of a certain metallic tension bar. Fig. 3 is an enlarged sectional detail taken on line *x*. Fig. 4 is a detail plan of a certain pressure head and Fig. 5 is a detail of a screw by means of which the various pressures may be obtained.

In said drawings, *a* indicates the body of a violin, violoncello, bass viol or similar stringed instrument.

b is the usual bridge for the strings and *c*, the post or stud, connecting the upper with the lower board of the body, attached in the usual manner.

To give greater tension and resonance to the body and thereby increase the power of the instrument when played upon, and at the same time improve the quality of the tone thereof, I have arranged on the body, transversely with relation to the longer axis, a tension bar, *d*, which is bent to bear upon the upper side of the instrument, being provided with upwardly and inwardly extending arms *d'*, *d'*, for that purpose, and which, at its central part crossing the body, lies a little away from said body as shown in Fig. 1. At a point near the sounding post or stud, *c*, the

said tension bar, *d*, is provided with a pressure head, *e*, which bears upon the back of the body of the instrument, the pressure being opposed to that of the bridge. The pressure is increased or diminished by means of a set screw or adjusting screw, *e*³, by means of which the pressure is increased or diminished at will.

The preferred construction of the pressure head is shown in Fig. 3 where, *e'*, is a wooden piece adapted to engage the instrument without injury to the varnish or other finish on the surface of the body, *e*² is a threaded bushing arranged therein to take the wear of the screw, *e*³ is the screw arranged in said bushing and having a nut, *e*⁴, which bears on outwardly against the under side of the tension bar and admits of the tension on the rod being increased or diminished without turning the screw *e*³. The bar, *d*, is slotted at *d*², to allow a limited lateral adjustment of the pressure head. The bar, *d*, is preferably of spring metal and the arms *d'*, *d'*, may thus be readily forced outward and then allowed to spring back into the desired position as shown in Fig. 1. This resiliency, however is not essential to the operativeness of the invention. The bar is preferably lined with textile or other material which will prevent scratching or other injury to the violin at the bearings; the lining being indicated in heavy line at *l*.

By the construction shown and described the bar and its pressure head may be quickly removed from the instrument, when it is desired to pack the latter away in its case, by simply loosening the screw *e*³.

The device may be placed in operative position with equal facility. When in position and pressure is brought on the under or rear board at the end of the post or stud, or near the same, a material increase in resonance is obtainable.

Having thus described the invention, what I claim as new is—

1. The improved violin, or like instrument, combining therein the body *a*, bridge *b*, and stud *c*, and a tension bar and pressure head bearing on the said body on the side thereof opposite the bridge, substantially as herein set forth.

2. In combination with a violin or similar instrument, a removable tension bar and

pressure head arranged at the back of said violin substantially as and for the purposes set forth.

3. In combination, a tension bar having
5 arms adapted to engage the upper side or front of the instrument and having a portion between said arms to extend transversely across the back of the instrument and a pressure head arranged and adapted to en-
10 gage the said back of the instrument at or near the stud or post, c, thereof, substantially as set forth.

4. In combination, the bar, d, having arms d', d', and the pressure head having an ad-

justing screw by means of which the pressure may be varied substantially as set forth. 15

5. In combination with the violin, or like instrument, a back bar having a pressure head and its adjusting screw, said bar being separable from said violin substantially as 20 and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of August, 1892.

CHARLES CLEMENTS KROPP.

Witnesses:

CHARLES H. PELL,

OSCAR A. MICHEL.