

(No Model.)

J. E. HENNING.
MUSICAL INSTRUMENT.

No. 478,933.

Patented July 12, 1892.

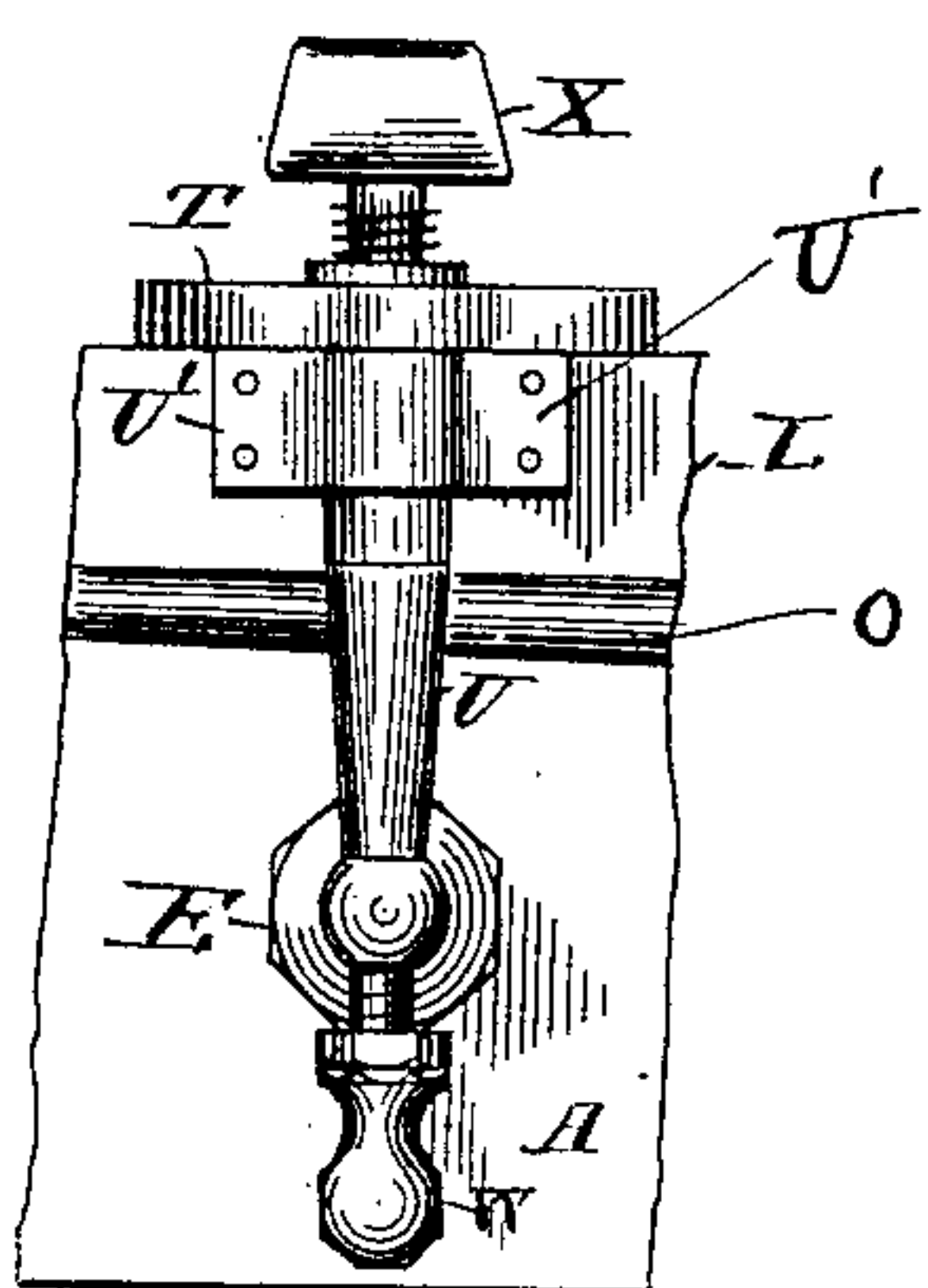


Fig. 3.

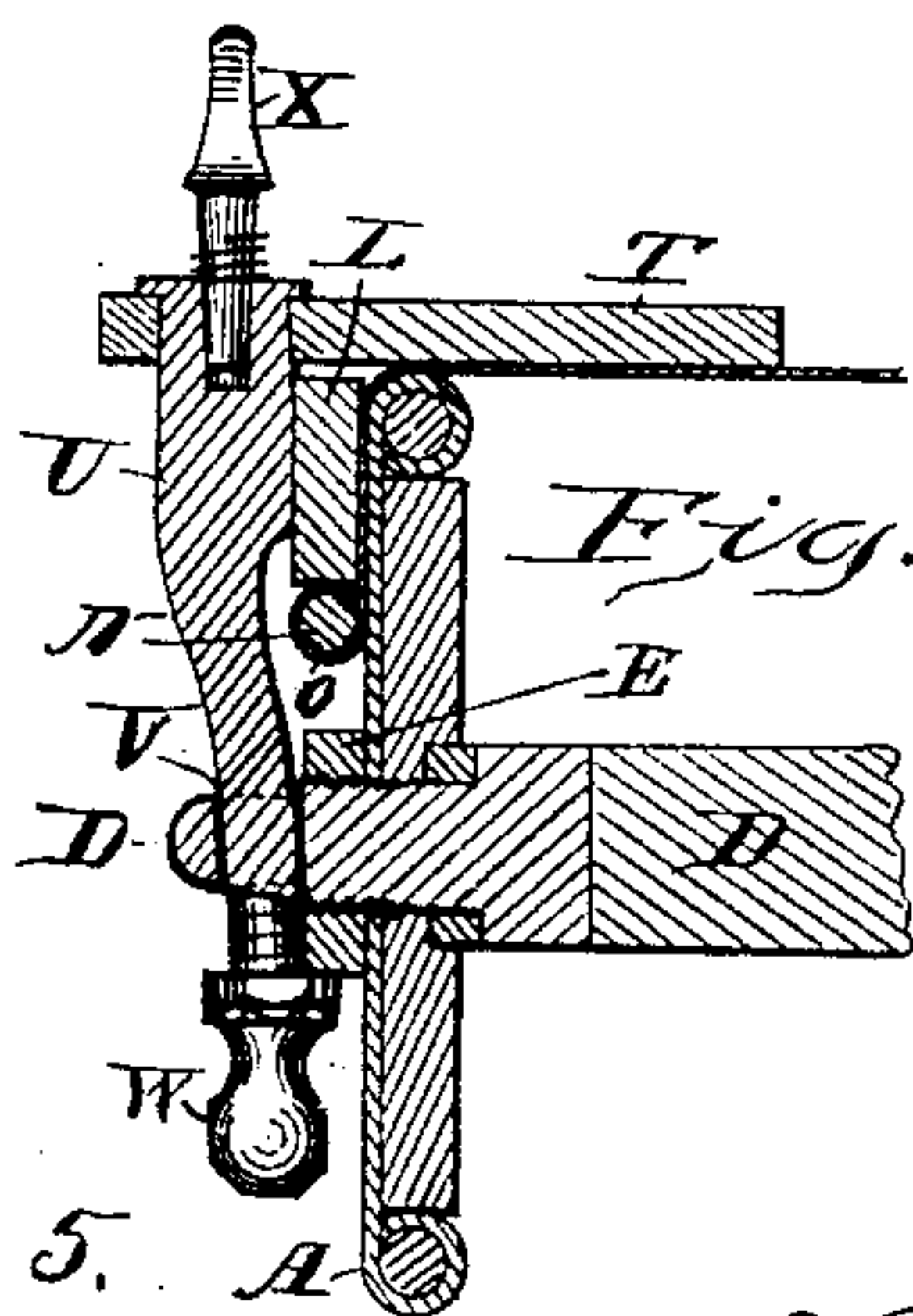


Fig. 4.

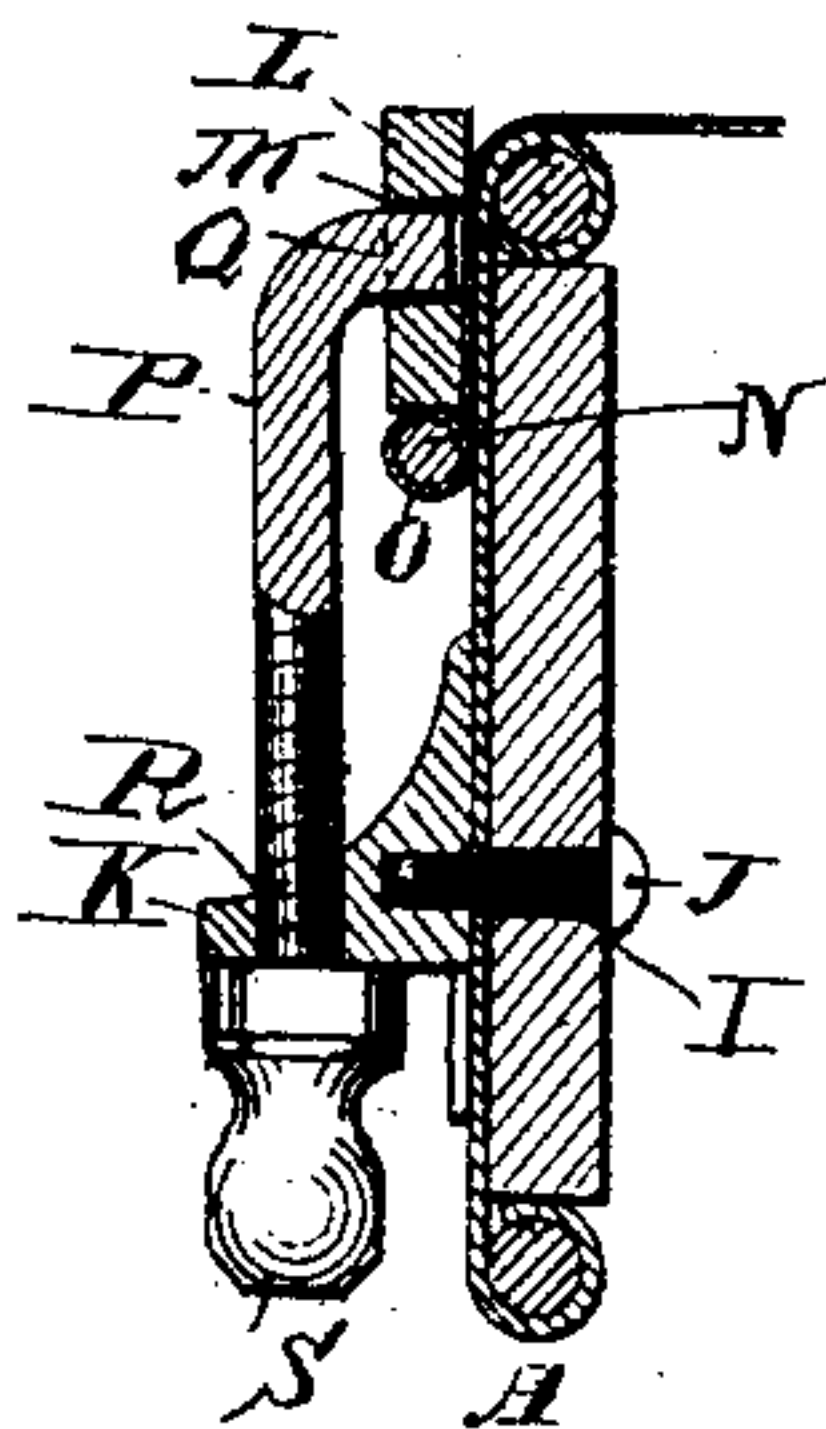


Fig. 5.

Fig. 1.

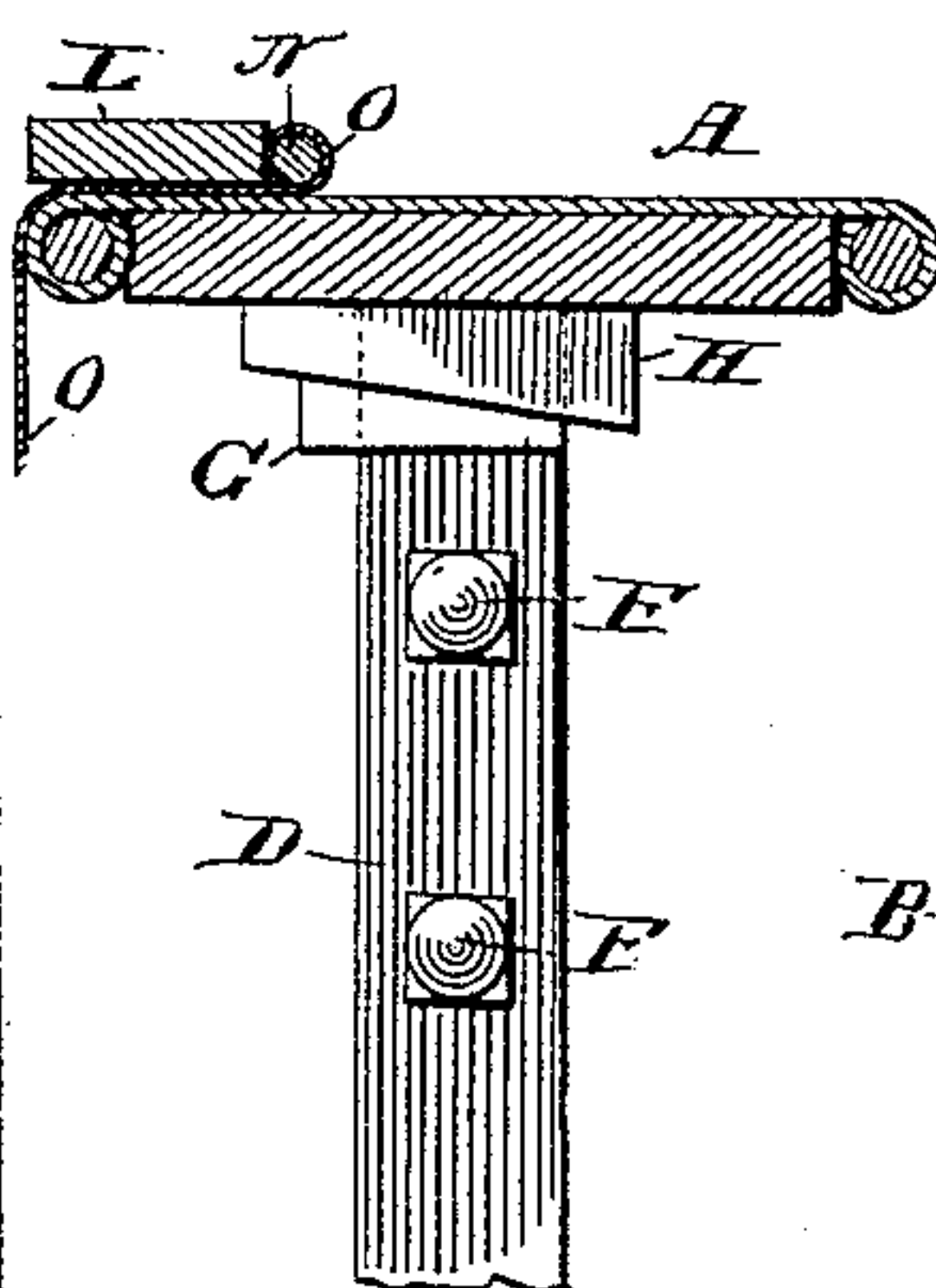


Fig. 6.

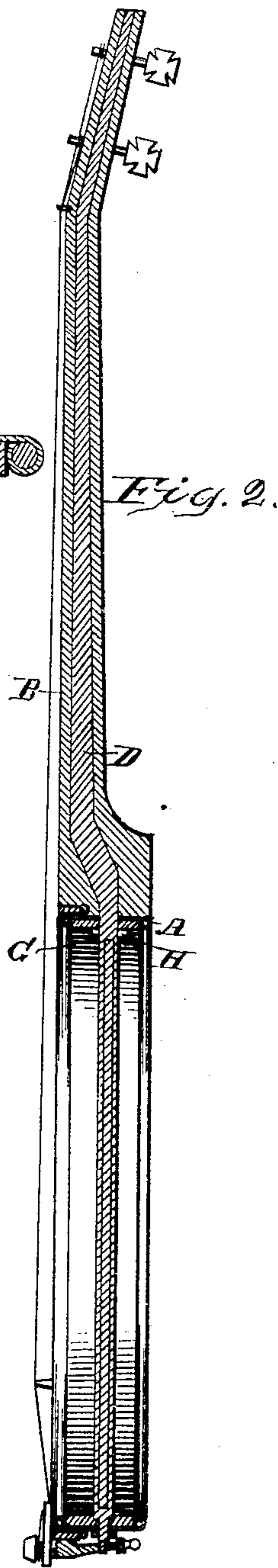
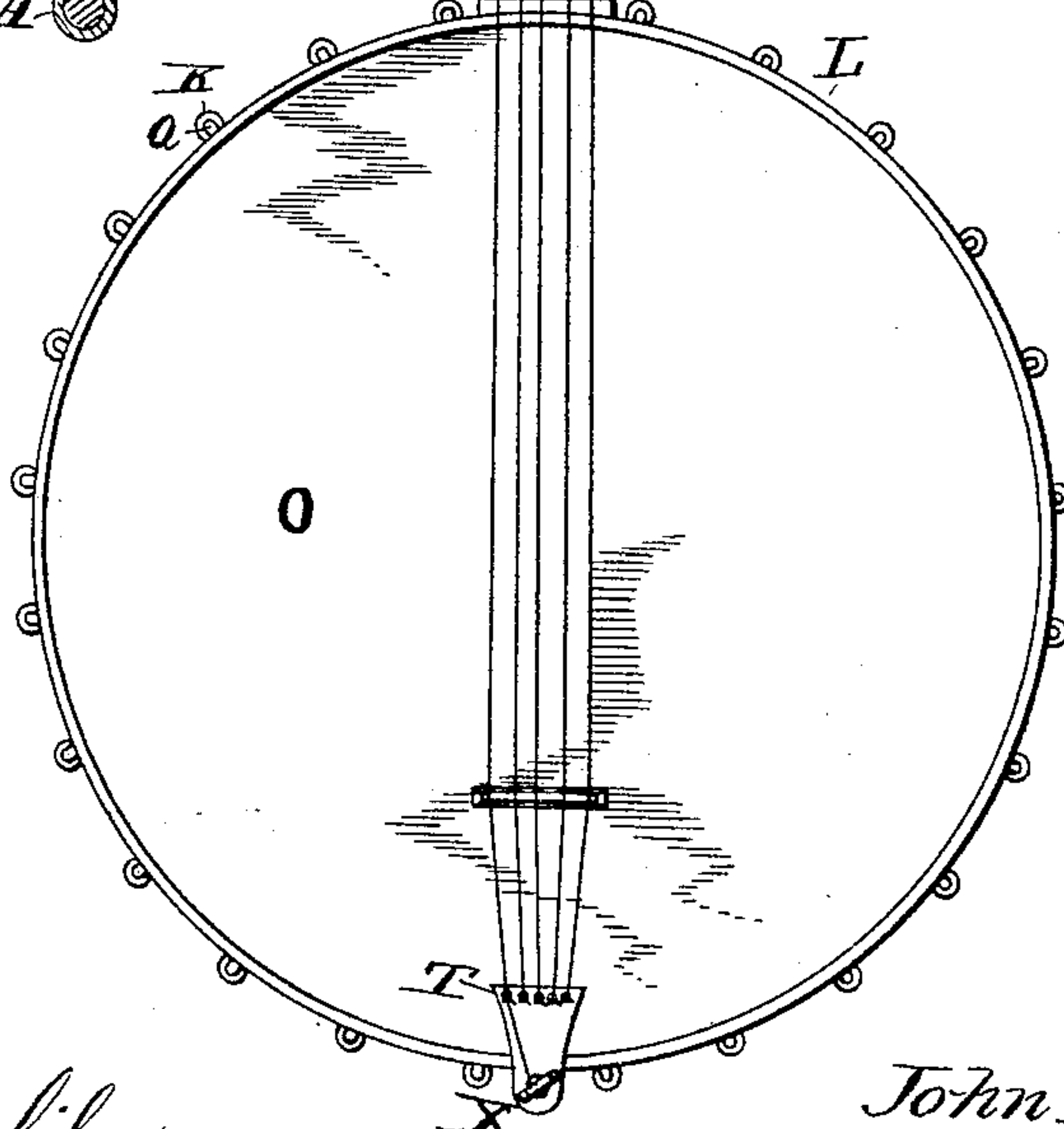


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN EGGERS HENNING, OF KANSAS CITY, MISSOURI, ASSIGNOR, BY MESNE ASSIGNMENTS, OF ONE-HALF TO W. S. HARPELL AND H. F. CARSON, OF CHICAGO, ILLINOIS.

MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 478,933, dated July 12, 1892.

Application filed April 29, 1890. Renewed June 9, 1892. Serial No. 436,119. (No model.)

To all whom it may concern:

Be it known that I, JOHN EGGERS HENNING, of Kansas City, county of Jackson, and State of Missouri, have invented certain new and useful Improvements in Musical Instruments, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to provide in stringed instruments—such as the violin, guitar, banjo, and the like—improved means for stiffening the frame and preventing the warping or distortion of the parts.

My invention also consists in certain improvements in the banjo for rendering it easier to manipulate and better adapted for the rendering of brilliant and difficult music.

In the accompanying drawings, Figure 1 is a top view of a banjo with my improvements attached. Fig. 2 is a central vertical longitudinal section of the same. Fig. 3 is a detail view of the tail-piece and pin. Fig. 4 is a central vertical section of the same. Fig. 5 is a detail view of the stretching device, and Fig. 6 is a detail view of the means of fastening the neck-brace to the rim.

Referring to the letters on the drawings, A indicates the rim of a banjo, for instance, which may be called, for the purpose of this specification, the "body" of the instrument, and B, the fretted neck, provided, as usual, at its upper end with keys of the usual sort.

D indicates a piece of rigid metal—for instance, steel, which, on account of its stiffness, can be made light, and is therefore preferable. This piece of metal, which I call a "brace," extends through the neck of the instrument, across the rim, and may be provided at its lower end with a male screw-threaded projection adapted to pass through the rim of the instrument and to be secured on the outside by means of the nut E. The brace may, for the sake of lightness, be split at its lower end where it crosses the body and the space between the split sides be filled in with a strip of wood, as indicated in the drawings; but this is a matter of convenience, which is left to the discretion of the manufacturer.

Inside of the rim, upon the brace near the place where it enters the neck, is secured

upon each side by bolts F the clamps G, whose upper ends are slightly beveled so as to receive the wedges H, by which the rim of the instrument is pressed firmly against the neck and the parts held rigidly in position. I have illustrated ordinary wedges for uniting the parts; but of course any desirable means whereby the union may be kept tight and firm may be employed.

The brace which I have described constitutes one of the main features of my invention and may be readily adapted to any style of stringed instrument which requires a stiffening-bar of the kind described. I have only illustrated it as applied to a banjo, because I deem that to be sufficient for the purpose of showing its relations and arrangement.

Through the rim of the banjo I provide a row of perforations I equidistant from each other and each adapted to receive a screw J, which screws into a bracket K on the outside of the rim.

L indicates an annular stretcher provided with a row of perforations M, corresponding in position to the perforations in the rim. This stretcher is adapted to fit over the head of the rim, and by pressing against the ring N, that is infolded in the edge of the skin-head O in the usual manner, to draw the head tight over the top of the rim.

P indicates links, each of which is provided upon its upper end with a projection Q at right angles to its main stem and with male screw-threads upon its other end. The projection is adapted to fit into one of the perforations in the stretcher and to have its other end pass through the hole R in the adjacent bracket. S indicates a nut adapted to screw upon the end of the link and by pressing against the bracket to draw the stretcher down over the head of the rim.

Heretofore the stretcher has been confined with links hooked over the edge of it; but these are objectionable, because they wear the sleeve of the performer and present obstructions against which his hand may strike and be impeded in its movement.

T indicates the tail-piece, provided with a row of perforations at its forward end, as usual, and with a single perforation at its

rear end, through which, by a flanged head or other convenient means, is secured the pin U, that is provided with the wings U', adapted to press against the side of the stretcher.

5 This pin is bent inwardly and is adapted to pass through a perforation V in the screw-threaded projection of the brace D. It is provided at its lower end with male screw-threads adapted to enter the nut W. By
10 screwing up the nut against the lower side of the projecting end of the brace the pin may be drawn downwardly. This movement, on account of the bend in the pin, tends by a wedge-like action to draw upon the tail-piece,
15 and when the instrument is strung up to secure it firmly in position.

Preferably in a socket in the top of the pin U is provided a key X, around which is wound the short or thumb string of the instrument
20 after it has been passed through one of the holes in the forward end of the tail-piece. This string is secured at its other end to a peg Y, that is set into the neck of the instrument in the position occupied in banjos of
25 ordinary construction, by a key. By this means I am able to dispense with the key in the middle of the neck, which has always proved a serious obstruction in the way of difficult playing, because it is possible only
30 with the greatest skill and care to prevent the hand from striking it. I also avoid any abrupt projection on the side of the neck, thereby rendering it smooth and as easily manipulated as the neck of a violin or guitar,
35 for instance.

I do not desire to confine myself to the exact construction and details of arrangement of the parts illustrated and described herein, because it is apparent that they may be in
40 many ways varied consistently with the scope of my invention. I have illustrated the form which appears to me at the present time to be desirable and which embodies the substance of my invention.

45 What I claim is—

1. In a musical stringed instrument, the combination, with the body of the instrument and its neck, of a metallic brace extending through the neck and across the body, and means for securing the brace to the body, 50 substantially as set forth.

2. In a musical stringed instrument, the combination, with the body and the neck of the instrument, and a metallic brace extending through the neck and across the body, of 55 a screw-threaded end upon the brace, adapted to pass through the side of the rim and be secured thereto by a nut, clamps upon the brace within the body of the instrument, and wedging devices for tightening the body against 60 the clamps, substantially as set forth.

3. In a musical stringed instrument, the combination, with the tail-piece, of a bent pin secured thereto, and an adjustable connection between the pin and the rim, whereby the 65 tail-piece may be fastened to the instrument and drawn against the tension of the strings, substantially as set forth.

4. In a banjo, the combination, with a smooth-sided neck and the body of the instru- 70 ment, of a peg Y in the side of the neck, a tail-piece adapted to be secured to the body, and a key upon the tail-piece, adapted to stretch a string from the peg Y, substantially as set forth. 75

5. In a musical instrument, the combination, with the body and a tail-piece adapted to be secured thereto, of a pin secured to the body and the tail-piece and adapted to hold the parts together, a socket in the top of the 80 pin, and a key X, adapted to fit into the socket and carry a string, substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

JOHN EGGERS HENNING.

Witnesses:

ARTHUR H. DEVER,
JAMES C. BOURKE.