(No Model.)

M. W. WHITE.

BRIDGE FOR STRINGED INSTRUMENTS.

No. 398,107. Patented Feb. 19, 1889.

Fig: 1.

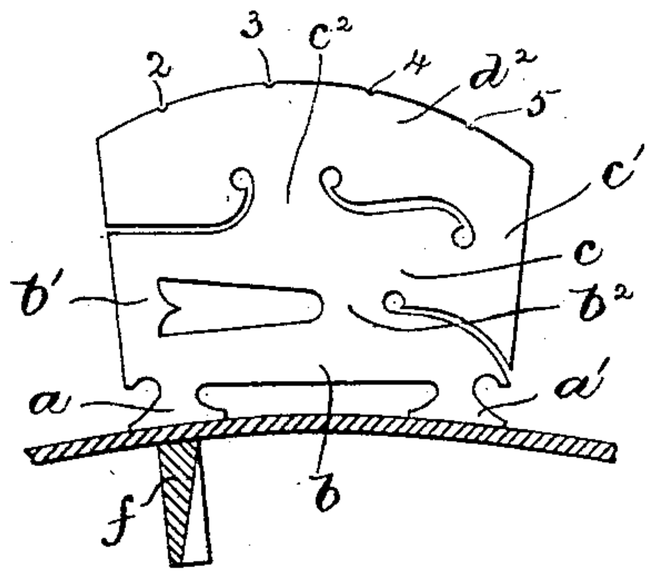


Fig: 2.

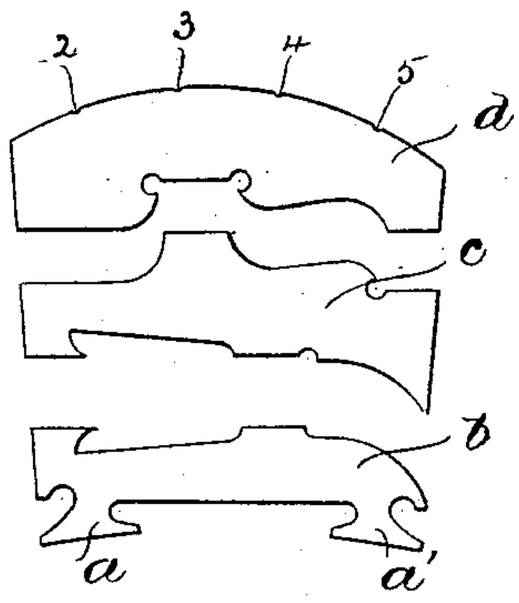
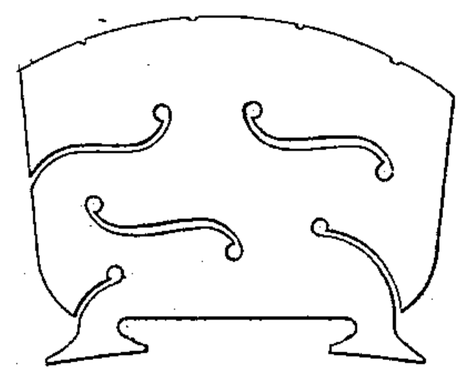


Fig: 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

MAURICE W. WHITE, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO GEORGE W. ROSS, OF SAME PLACE.

BRIDGE FOR STRINGED INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 398,107, dated February 19, 1889.

Application filed July 9, 1888. Serial No. 279,434. (No model.)

To all whom it may concern:

Be it known that I, MAURICE W. WHITE, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Bridges for Stringed Instruments, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to construct a bridge for stringed instruments, whereby one end of the bridge may vibrate more freely than the opposite end or may rock upon said opposite end.

Bridges now commonly made are fitted to the instrument one of the feet bearing directly over the base-bar, and the strings are drawn taut over the bridge. As the bridge is cut, the tension upon it is different for each string.

In order to improve and enrich the quality of tone, it has been found in practice that the tension on the bridge above the base-bar should be lessened as a string vibrates to enable the base-bar the more freely to vibrate, while the tension upon the opposite end of the bridge, or that end nearest the sounding-post, should be increased, as the sounding-post serves as a pivot.

To practically carry out the object above stated, I have cut or so formed the bridge as to present three bars connected together, so that when the strings are drawn taut and set in vibration they act as a set of compound levers, as will be hereinafter described.

Figure 1 shows a front face view of a bridge embodying this invention, a sectional view of the face-plate and base-bar being also shown; Fig. 2, a view showing the bridge shown in Fig. 1 separated to show the independent bars; and Fig. 3, a modification to be referred to.

The bridge is cut, sawed, or formed to present feet *a a'* and the bars *b c d*. The bars *b* and *c* are joined at one end by the part *b'*, and near but at one side of the middle by the waist b^2. The bars *c* and *d* are joined at one end by the part *c'*, and near but at one side of the middle by the waist c^2. The foot *a* bears upon the face of the instrument directly above the base-bar *f*, while the opposite foot, as *a'*, bears upon the face near the sounding-post.

The heaviest string is drawn taut over the bridge at 2, or at a point over the base-bar *f*, and the lighter strings rest upon the bridge at points toward the right, as at 3, 4, and 5.

When the string at 5 is set in vibration, the bar *d* is vibrated or rocked on the waist c^2 and the bar *c* is vibrated or rocked on the waist b^2, the tendency being to lift the bar *b* at the point *b'*, or directly over the base-bar, thereby permitting the base-bar to vibrate more freely, the entire bridge rocking on the foot *a'*.

When the string at 4 is set in vibration, the result is substantially the same as above set forth, it being aided by the continuous tension of the string at 5.

When the string at 3 is set in vibration the tension comes almost directly upon the waist c^2; but it is aided by the continuous tension of the strings 4 and 5, which completely overbalance the continuous tension of the string at 2, and hence the result above set forth follows.

It will be observed that as the bars vibrate or rock they act as a set of compound levers, the tendency of which is to lift the foot *a*, or to relieve as much as possible its tension on the base-bar. The bars *c d*, or equivalents, and the connecting parts and waist form the crown portion of the bridge.

In Fig. 3 I have shown a slight modification of the bridge shown in Figs. 1 and 2, the opening formed just above the lowest bar being diminished in size and having an additional slit.

I claim—

1. A bridge for stringed instruments, formed to present three horizontally-arranged bars, *b c d*, connecting parts *b' c'*, and the waists b^2 c^2, to act as a set of compound levers, substantially as described.

2. A bridge for stringed instruments, formed to present the bar *b*, having feet *a a'*, the bar *c*, the part *b'*, and waist c^2, said bars being arranged substantially horizontal and the waists being slightly offset from the middle, thereby leaving one end of the bar *d* and the

opposite end of the bar *c* free, substantially as and for the purposes set forth.

3. A bridge for stringed instruments, formed to present the horizontal bar *b*, having feet *a* *a'*, the foot *a* resting directly above the base-bar, and a crown portion, the connecting part *b'*, and waist b^2, as described, whereby the entire bridge may vibrate or rock on the foot *a'*, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MAURICE W. WHITE.

Witnesses:
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