

(No Model.)

M. W. WHITE.

VIOLIN BRIDGE.

No. 330,276.

Patented Nov. 10, 1885.

Fig:1.

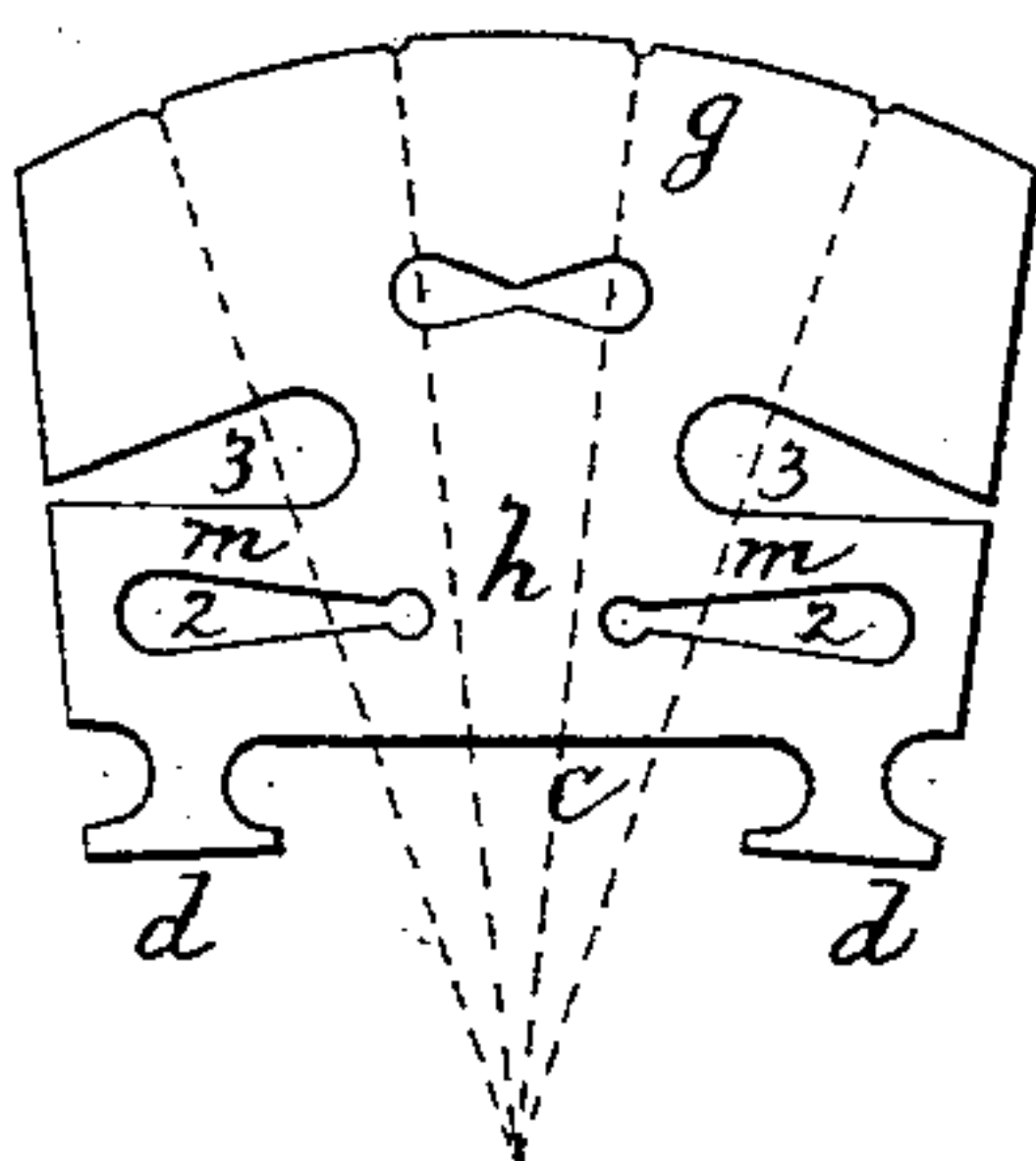


Fig:2.

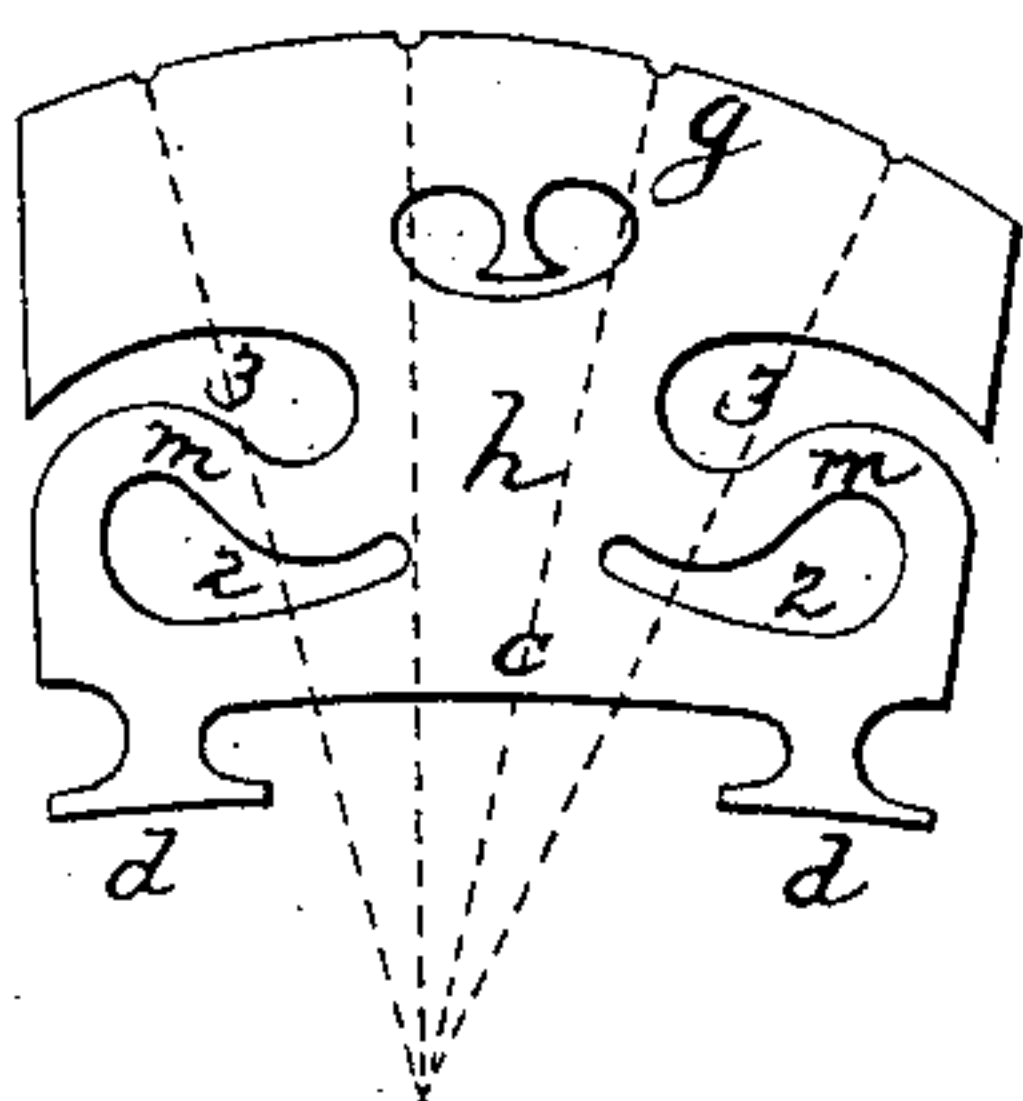
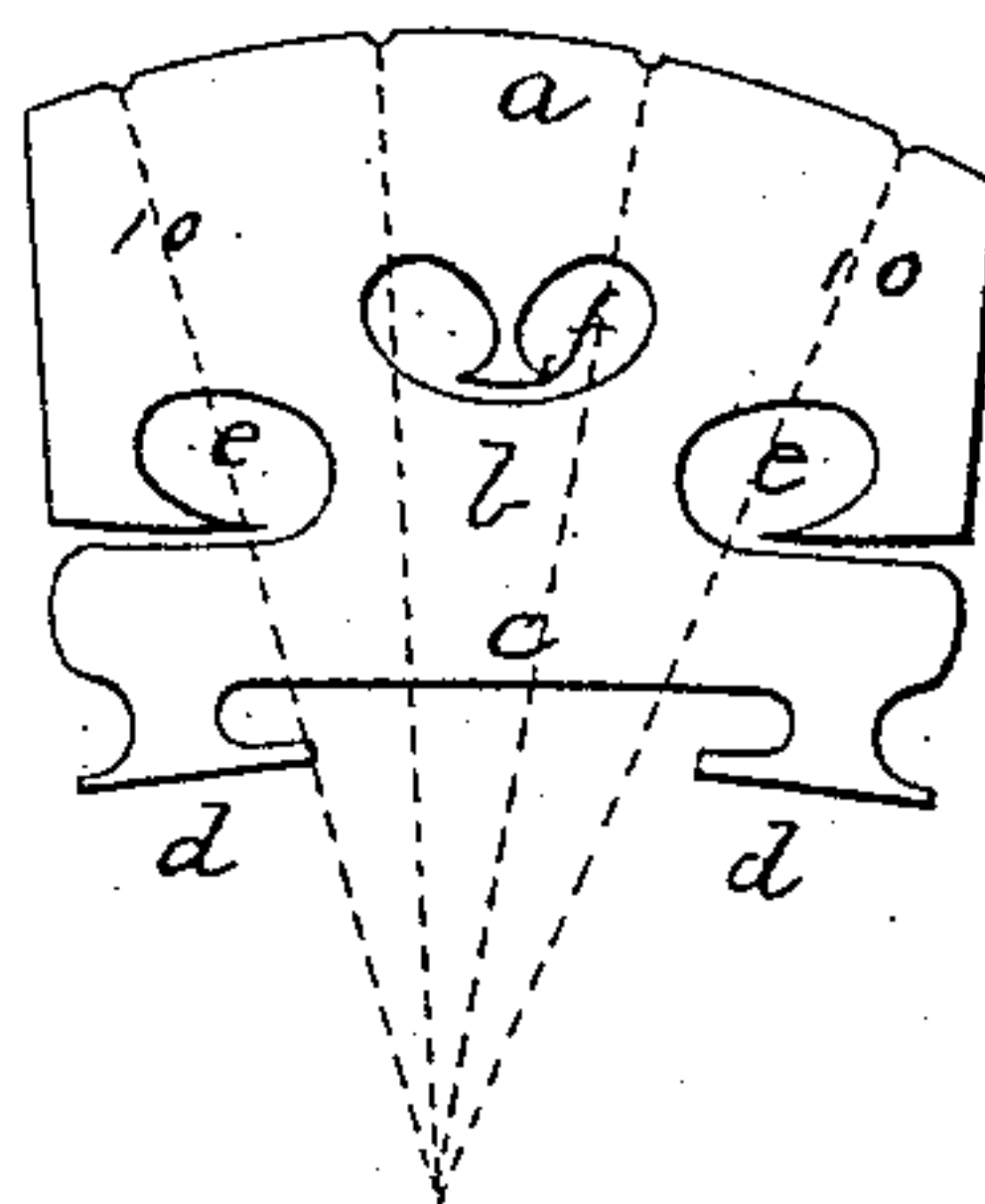


Fig:3.



Witnesses.  
*George Moffette Jr.*  
*B. J. Boyer.*

Inventor.  
*Maurice W. White*  
*by Crosby & Gregory*  
*attys*

# UNITED STATES PATENT OFFICE.

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

## VIOLIN-BRIDGE.

SPECIFICATION forming part of Letters Patent No. 330,276, dated November 10, 1885.

Application filed February 2, 1885. Serial No. 154,650. (No model.)

*To all whom it may concern:*

Be it known that I, MAURICE W. WHITE, Boston, of (Somerville,) county of Middlesex, of State Massachusetts, have invented an Improvement in Violin-Bridges, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In violins and other similar-stringed instruments the strings are mounted on a bridge composed of a thin piece of wood having a convex top, the feet of the bridge resting on the belly of the instrument between the usual sound holes, one foot of the bridge resting on the belly of the instrument near the usual sounding-post, while the other foot thereof rests on the belly just above the base-bar. The upper convex edge of the bridge supports the strings in such manner as to impart vibrations to the body of the instrument, according to the pitch, and the air inclosed within the body of the instrument vibrating in unison therewith reinforces the sound, giving it fullness and richness. According to the well-known law of acoustics, intensity of sound depends upon the amplitude of the vibrations; hence it follows that to produce tones of greater intensity than heretofore upon stringed instruments with the same vibration of the strings, the amplitude of the vibrations of the air inclosed within the body must necessarily be augmented. This result I have accomplished in a very satisfactory manner by the production of a new bridge possessing a greater amount of elasticity of spring than heretofore, it more readily communicating the vibrations to the body of the instrument, and also yielding readily to the vibrations produced by and within the body of the instrument, thus giving greater amplitude of vibration to the air inclosed within the body and correspondingly augmenting the intensity of the tone. Bridges such as heretofore made have had one long bar extending from foot to foot, and this single bar has supported the waist or center of the bridge.

My improved bridge contains two bars, and the waist or center thereof is made narrower than heretofore, such construction permitting

the crown of the bridge to vibrate in every direction more freely than heretofore, and more readily yielding permits of greater amplitude of vibration of the body of the instrument and the air inclosed therein.

Figure 1 represents my improved bridge prior to being fitted to a violin; Fig. 2, a modification thereof, and Fig. 3 a bridge such as commonly used.

Referring first to Fig. 3, showing the old form of bridge, the top or crown *a* is supported by the broad waist or center *b* rising from a bar, *c*, resting on the feet *d d*.

In my invention (see Figs. 1 and 2) the crown *g* of the bridge is supported on a waist or center, *h*, which is weakened or made narrower by the openings 2 2. The latter openings, taken with the slots 3 3, cut into the ends of the bridge, forming two bars, *m* and *c*, the latter having feet *d d*. The line of pressure of each string on the bridge is toward the center of the circle of which the crown *a* is an arc, or in the dotted radial lines and viewing the drawings it will be seen that the portions of the bridge in Figs. 1 and 2 crossed by said radial lines will yield more readily than will the bridge shown in Fig. 3, and as the vibrations of the body of the instrument are more or less resisted by the bridge, it follows that the bridges shown in Figs. 1 and 2, having two bars, yield more readily than when a bridge is employed such as represented at Fig. 3.

In the old form of bridge there is but one opening in the lines 10 and 10, nearest the ends of the bridge, whereas in my improved bridge there are two open spaces, and the bars left by the removal of the material of the bridge are narrower than in the old bridge, and the waist or center in the line of the elongated openings 22 is much narrower and consequently less stiff than in the old form of bridge, all of which features are essential in giving the body of the instrument greater freedom to vibrate, augmenting the amplitude of the vibrations of the air inclosed within the body, and resulting in producing a tone of greater intensity and quality.

I claim—

1. A bridge for stringed musical instruments,

it having a head and feet and two horizontal bars interposed between the feet and head, substantially as and for the purpose described.

2. The bridge slotted from its edges in  
5 toward its center, as at 3, to form a waist, *h*,  
and provided with openings 2 2 below the  
slots 3, the said openings being extended in  
toward the vertical center of the bridge farther  
than the slots 3 3, thus contracting the waist  
10 of the bridge, 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:

GEO. W. GREGORY,  
B. J. NOYES.