June 17, 1930. T. A. GAST 1,764,679

GUITAR

Filed Feb. 1, 1928

Fig. 1

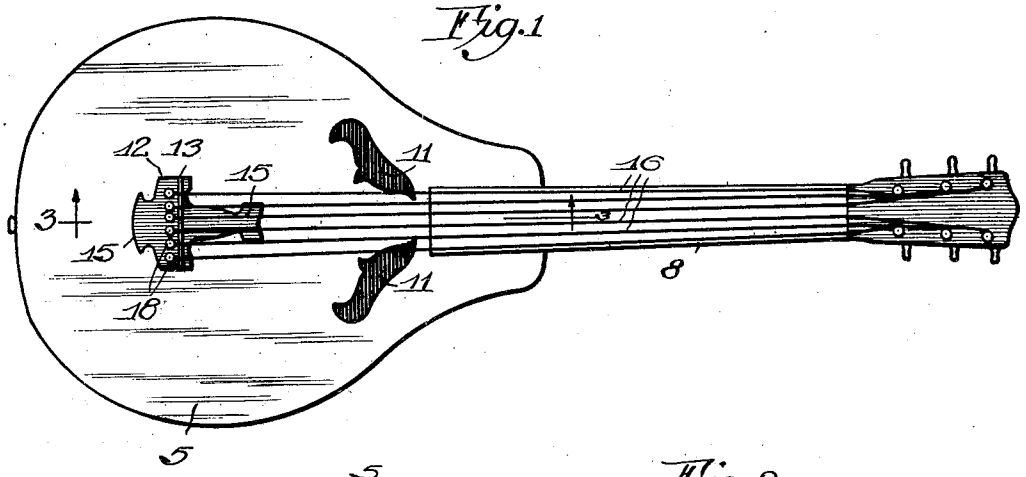


Fig. 2

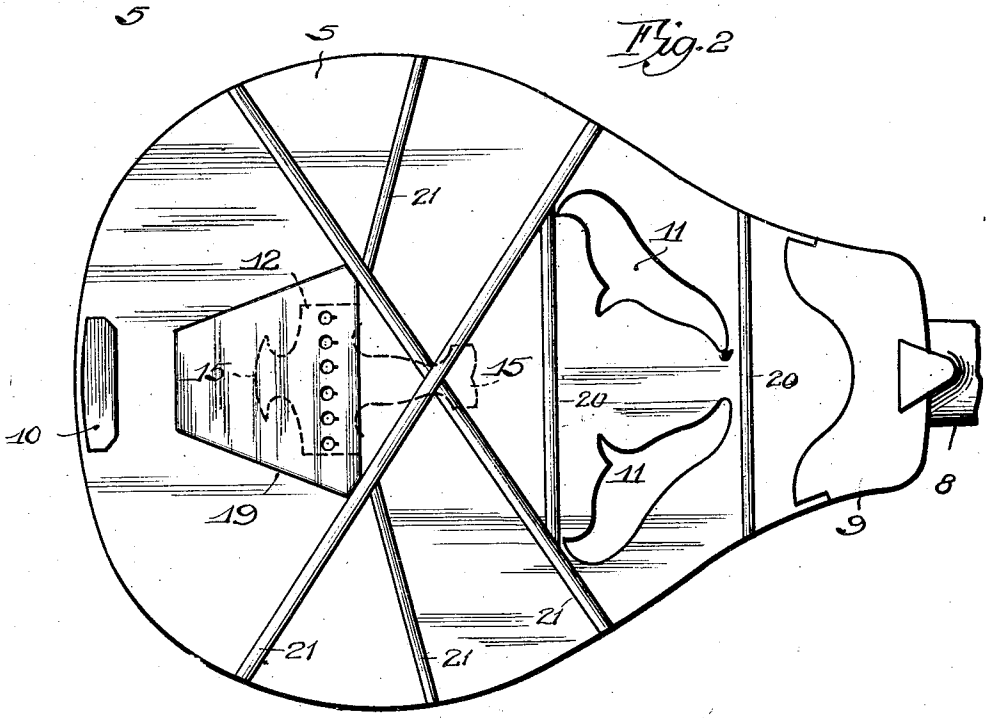
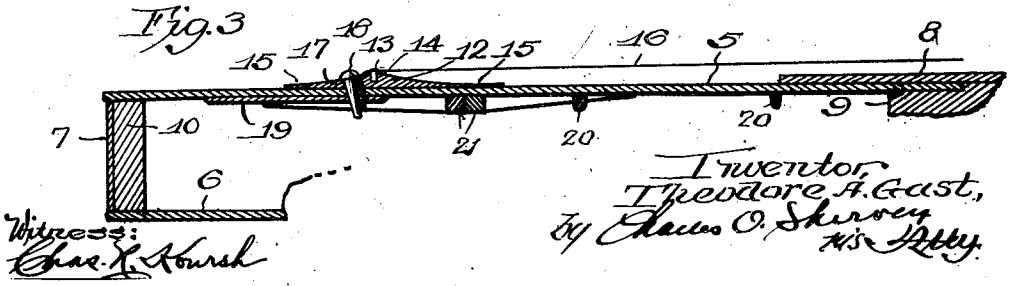


Fig. 3



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UNITED STATES PATENT OFFICE

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GUITAR

Application filed February 1, 1928. Serial No. 251,010.

This invention relates to stringed musical instruments, such as guitars and the like, and its principal object is to improve the tone qualities of instruments of this type, and to remedy certain defects common to such instruments. In the ordinary guitar a narrow bridge is employed which is glued to the top of the instrument, but due to the strain thereon caused by the tension of the strings, the narrow bridge is often caused to tilt on one edge, thereby bending down the bowed top of the instrument between the bridge and the block at the neck, and thereby impairing the tone quality of the instrument. Sometimes the strain is so great that the bridge is torn from the top, or is torn in two. One object of the invention is to provide a bridge for guitars, and the like, which overcomes all of said difficulties and greatly increases the effectiveness of the instrument.

With said objects and advantages in view, the invention consists in a stringed musical instrument such as a guitar, having a bridge containing an under face of relatively large area whereby an increased gluing surface is obtained, and the tendency for the bridge to tilt under the influence of the strings is practically eliminated. It further consists in a bridge as above described, glued to the outer face of the top of the instrument, and an associated reinforcing plate glued to the under side of the top directly below the bridge and affording a reinforcement for the top at a place under the bridge, without interfering with the proper vibration of the top to obtain the necessary tone quality. It further consists in the several novel features hereinafter set forth and claimed.

The invention is clearly illustrated in the accompanying drawing, in which:

Figure 1 is a plan of a guitar embodying one form of the present invention;

Fig. 2 is a view thereof, looking from below, with the bottom and sides removed, and a fragment of the neck broken away; and

Fig. 3 is a detail, vertical section taken on the line 3—3 of Fig. 1.

Referring to said drawing, which illustrates a simple embodiment of the invention, the reference character 5 designates the top, 6 the bottom, and 7 the sides of the body of the instrument and 8 designates the neck of the instrument. Blocks 9 and 10 at the ends of the body connect the top, bottom and sides. All of these parts are glued together as usual. Sound openings 11, of any suitable design, are provided in the top 6, as is customary.

The bridge of the instrument is seen at 12, and as shown, the bridge is made relatively long and wide, thereby providing a gluing face on its underside of considerable area as compared with the gluing faces of bridges now on the market. The bridge is made relatively high at the place where the saddle 13 is placed as compared with the remainder of the bridge, and it is grooved transversely at the high place 14 to receive the saddle. The saddle receiving portion extends transversely of the instrument and the relatively long portion is preferably in the form of a projection narrower than the saddle receiving portion and extending at right angles thereto. The long dimension of the bridge, that is to say, the part which projects from the saddle receiving portion, extends lengthwise of the instrument. Projecting portions may extend from both sides of the saddle receiving portion as shown.

From the high place 14, the upper face of the bridge slopes toward the upper and lower ends of the top 6, and it is made quite thin at the edges 15. The exact shape of the bridge is immaterial, broadly speaking, but by giving it an ornamental appearance, the attractiveness of the instrument is greatly enhanced, and while I have illustrated the upper face of the bridge as sloping from both sides of the saddle, it is possible to entirely omit the sloping part at one side thereof.

Directly behind the saddle, the bridge is formed with the usual holes 17 for the pegs 18 that hold the strings 16 in place. The other ends of the strings are attached to the keys as usual. The bridge is glued to the upper face of the top 6 with the holes 17 at the customary place.

To the underface face of the top 6 below the bridge is glued a relatively thin sheet or plate 19, preferably formed of wood and extending from the saddle portion of the bridge

backwards toward the lower end of the guitar body. Some considerable space is left between the sheet or plate 19 and the block 10 to avoid interference with the free vibration of the top 6 at this place. The sheet or plate 19 acts as a reinforcement, under the bridge, and strengthens the top at this point.

Transverse and diagonally extending ribs 20, 21 are glued to the under face of the top 6, and form a reinforcement therefor. The upper faces of the ribs are slightly convex or bowed so as to give the required convex or outwardly bowed shape to the top 6, when glued to the sides and blocks of the body.

The thickness of ordinary bridges tends to diminish the vibratory action of guitars, whereas the relatively low bridge permits freer vibration and consequently better tone qualities. On account of the great gluing surface of the bridge, it not only is secured more firmly to the top, but because of the long extent thereof, the tendency for the bridge to tilt, when subjected to the tension of the strings, is practically eliminated, and the tendency to flatten out the bowed part of the top between the bridge and block 9 is eliminated. This also has a tendency to improve the tone volume of the instrument. The tension of the strings on the bridge is considerable, as is well known, but by increasing the length of the bridge, lengthwise of the instrument, a greater hold on the top is obtained with the result that the tendency of the bridge to tilt and bend down the bowed top is eliminated. The reinforcing plate on the under face of the top adds strength and stiffness to the thin top without interfering with the free vibration thereof.

More or less variation of the exact details of construction is possible without departing from the spirit of this invention; I desire, therefore, not to limit myself to the exact form of the construction shown and described, but intend, in the following claims to point out all of the invention disclosed herein.

I claim as new and desire to secure by Letters Patent:

1. A stringed musical instrument comprising a sounding board, and a bridge arranged for the attachment of strings thereto and having a transverse saddle receiving portion over which the strings extend, and a relatively long member at right angles to the saddle receiving portion which extends lengthwise of the instrument, the entire lower face of the bridge being contiguous with the sounding board and secured to the top thereof.

2. A stringed musical instrument comprising a sounding board and a bridge having one face contiguous therewith and secured thereto, said bridge being formed with a transverse saddle receiving portion, and a projection which is narrower than the saddle receiving portion, the upper face of said projection sloping towards the face of the sounding board and terminating in a relatively thin edge portion, said projection extending in a direction lengthwise of the instrument.

3. A stringed musical instrument comprising a sounding board, a bridge to which strings are attached, said bridge being formed with a transverse saddle receiving portion, and a projection at right angles thereto extending lengthwise of the instrument, said bridge being permanently secured to said sounding board, and a relatively thin reinforcing plate secured on the under side of the sounding board below the bridge.

THEODORE A. GAST.