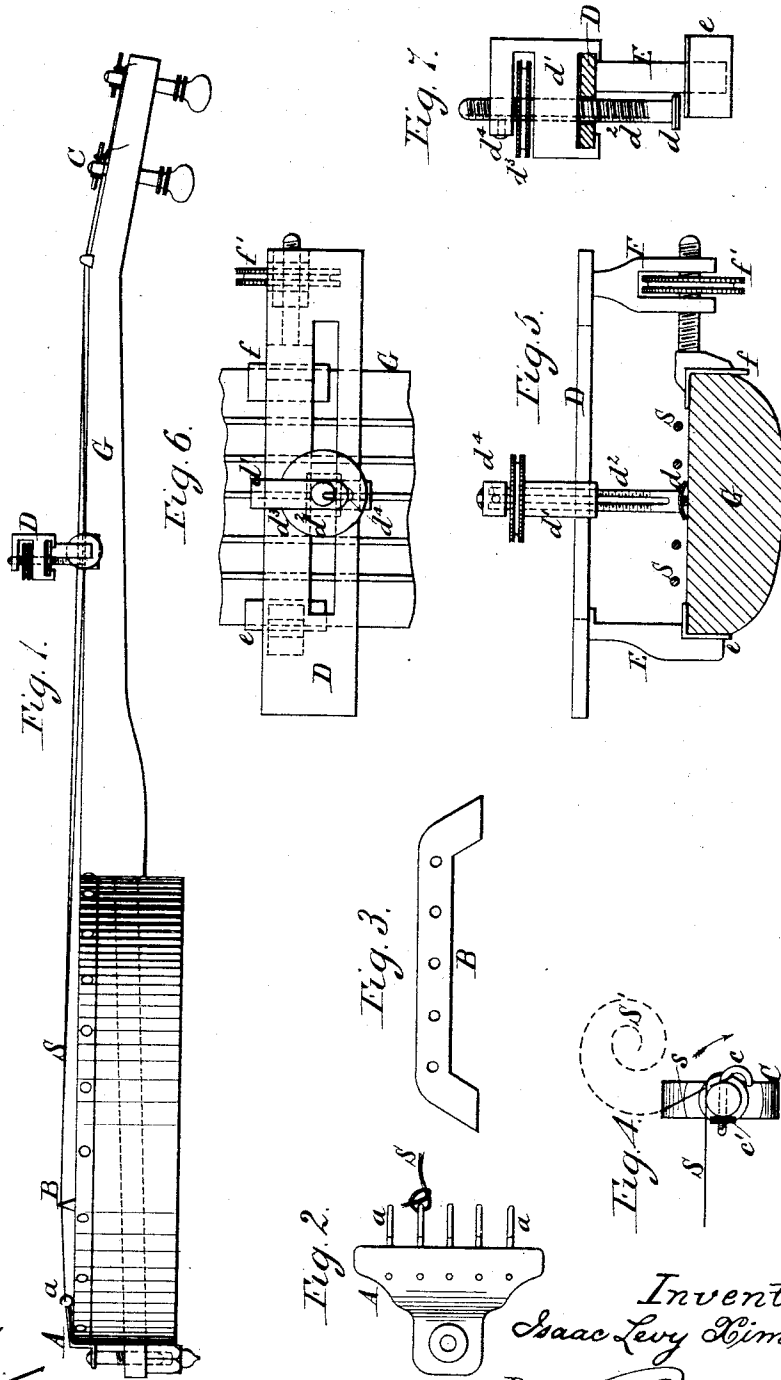


(No Model.)

I. L. XIMENES.
STRINGED MUSICAL INSTRUMENT.

No. 439,230.

Patented Oct. 28, 1890.



Witnesses:
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UNITED STATES PATENT OFFICE.

ISAAC L. XIMENES, OF LONDON, ENGLAND.

STRINGED MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 439,230, dated October 28, 1890.

Application filed May 14, 1889. Serial No. 310,741. (No model.)

To all whom it may concern:

Be it known that I, ISAAC LEVY XIMENES, (usually known as "GIOVANNI LUIGI," a citizen of Holland, residing at 172 Hampstead Road, London, England, have invented new and useful Improvements in Banjos, Guitars, and such Like Stringed Instruments, of which the following is a specification.

My invention relates to simple and convenient means of holding, guiding, and tuning the strings of banjos, guitars, and such like stringed instruments, as I shall describe, referring to the accompanying drawings.

Figure 1 is the side view of a banjo. Fig. 2 is a plan to an enlarged scale of the hook-plate for holding the ends of the strings. Fig. 3 is a front view of the bridge for guiding the strings. Fig. 4 is a plan of one of the tuning-pegs. Fig. 5 is an elevation. Fig. 6 is a plan, and Fig. 7 is a transverse section, of the clamp used in tuning.

As shown at A, Fig. 1 and in Fig. 2, the plate which is fixed at the base of the instrument has fixed to it hooks *a*, of which there may be one for each string *S*, or one for several strings, which are tied by knots to the hook or secured to them by knotted loops.

At B, Fig. 1, is the bridge, which, instead of having the usual notches in its upper edge, has holes, as shown in Fig. 3, through which the strings are passed, so that however forcibly a string is plucked or struck, as it may often be, in a transverse direction it cannot be displaced, as it often is when a notched bridge is employed; but when released it returns to its proper position.

At C, Fig. 1, are the tuning-pegs, each of which is made as shown in Fig. 4. A hooked wire *c* is secured by a nut *c'* in a transverse hole bored through the peg, and a bight or loop of the string *S* is engaged in the hook, on turning which round in the direction of the arrow, so as to wind on the string, the first convolution overlies the loose end *s* and squeezes it between the string and the body of the peg, so that it cannot slip. As by holding the string in this manner to the peg it has not, as usual, to be passed through a hole of the peg, it can be readily engaged on the peg even when there is a coil of loose string

(indicated by the dotted lines *S'*) beyond the peg.

At D, Fig. 1, is shown a clamp, of which Figs. 5, 6, and 7 are full-sized views, this being an implement that gives great facility in tuning, as I will now explain.

Often in tuning it is necessary to apply a finger at some part of a string to press it on one of the frets. Then while the string is thus pressed it has to be struck to compare its pitch with that of another string. The two hands of the operator being thus occupied, he cannot at the same time turn the tuning-peg, but in order to do so must cease either to press the string to the fret or to strike the string.

The clamp D is intended to take the place of the pressing-finger, thus leaving both hands free, the one to strike the string, the other to turn the tuning-peg.

The clamp D is of bridge form having two upright limbs E F, carrying the upper bar D. Two cheeks *e* and *f* clamp between them the fret-board G at any part of its length, the clamping being effected by turning a milled nut *f'*, situated in a fork of the limb F, this nut working on the screwed stem of the cheek *f*. The upper bar D has a slot through which passes the screwed stem *d²* of a presser *d*. This stem also passes through a sliding piece *d'*, in a slot of which is a milled nut *d³*, working on the stem *d²*. The stem *d²* is grooved along its length, into which groove projects a stud *d⁴*, fixed in the sliding piece *d'*, so as to prevent the stem *d²* from turning when the nut *d³* is turned. The clamp being fixed at any part of the length of the fret-board G, the sliding piece *d'* is slid along the upper bar D until the presser *d* is immediately over the string which has to be tuned. Then by turning the nut *d³* the presser *d* is forced down on the string, pressing it as a finger. This string can then be struck and its tuning-peg at the same time turned to bring it to the desired pitch.

Having thus described the nature of my invention, and in what manner the same is to be performed, I claim—

1. A banjo, guitar, or similar stringed instrument having at its base hooks to which

the ends of the strings are tied, a bridge with holes through which the strings are passed, and tuning-pegs with projecting hooks on which bights of the strings are engaged, substantially as and for the purposes set forth.

2. For facilitating the tuning of a banjo, guitar, or similar stringed instrument, a bridge-clamp which can be fixed by means of a nut and screw at any part of the fret-board and which has a presser transversely adjustable, so that it can by means of a nut on its screwed stem be made to press on any one of the strings, substantially as described.

3. A banjo, guitar, or other stringed instrument having tuning-pegs C, provided with

projecting hooks c, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 26th day of April, A. D. 1889.

I. L. XIMENES.

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