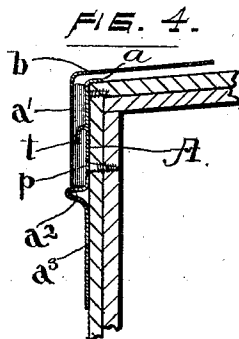
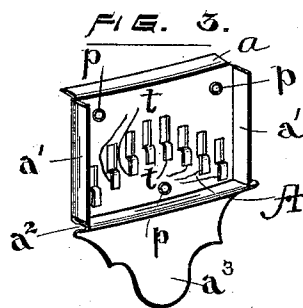
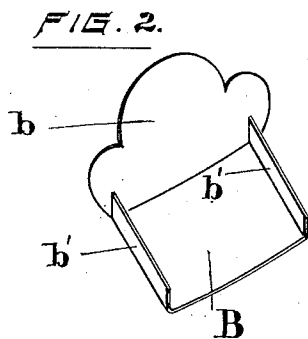
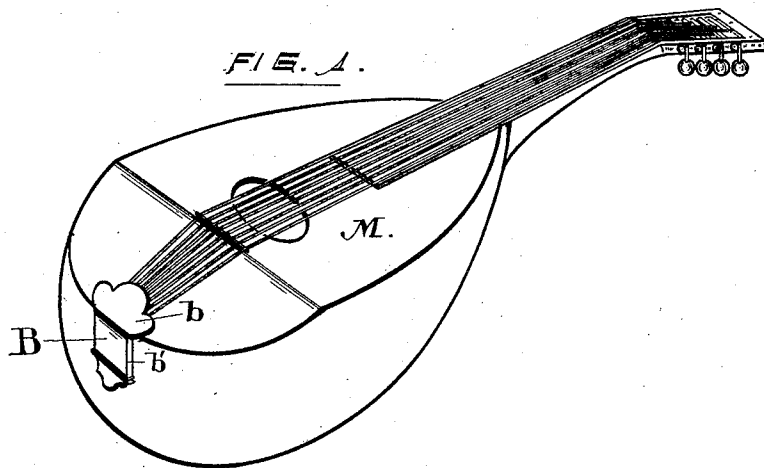


(No Model.)

H. E. WURLITZER.
STRINGED MUSICAL INSTRUMENT.

No. 519,751.

Patented May 15, 1894.



WITNESSES

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UNITED STATES PATENT OFFICE.

HOWARD E. WURLITZER, OF CINCINNATI, OHIO.

STRINGED MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 519,751, dated May 15, 1894.

Application filed December 6, 1893. Serial No. 492,917. (No model.)

To all whom it may concern:

Be it known that I, HOWARD E. WURLITZER, a citizen of the United States, residing at Cincinnati, Ohio, have invented new and useful Improvements in Stringed Musical Instruments, of which the following is a specification.

My invention relates to stringed instruments of the mandolin class, its object being to improve the same in respect to the devices for securing and protecting the ends of the strings.

To this end, my invention consists in a string holder and guard adapted to be attached to the instrument at the back end thereof, for the convenient attachment of the strings and for guarding and protecting the same against abrasion or wear from the arm or hand of the performer, and also to protect the arm and clothing of the performer from injury by contact with the rough and exposed ends of the strings. It has long been common to provide instruments of this class with an angle plate at the rear and covering the adjacent corner or edge of the instrument having pins for attachment of the strings and a supplemental hinged plate to lie over the rear end of the strings to protect them from contact of the hands or arms and to correspondingly protect the hand or arm of the performer. To this objection exists, such as the impracticability of keeping a hinge joint from rattling, and the projection of the hinge beyond the general surface as an obstruction. To remedy these defects and improve the construction in other aspects, I provide a string plate, having tongues for attachment of the strings cut from the plate and bent over backward as hooks—the metal of the tongues being hardened and strengthened by the act of cutting and bending;—and having the outer edges of the plate turned up as guide-gibs for the reception and secure retention of a guard plate formed to engage therewith in a firm and resilient connection, to completely inclose and protect the entire string plate and strings and lap over the face of the instrument as a guard to the hand and present a perfectly smooth guard surface throughout. My invention is illustrated in the accompanying drawings, in which—

Figure 1, is a general perspective view of a mandolin showing my invention complete as applied thereto. Fig. 2, is a perspective view of the guard-plate detached. Fig. 3, is a perspective view of the string or guard plate detached; and Fig. 4, a vertical cross section of the rear end of the instrument and of the guard plate attached thereto, as applied in use.

Referring now to the drawings: A, designates a plate of sheet metal adapted to be secured to the back of an instrument M, such as a mandolin. The plate is substantially rectangular in form, with a flap, *a*, at the top edge turned forward over the angle or edge formed by the top and back of the instrument; flaps, *a'*, *a'*, turned backward at opposite sides to form substantially parallel guides or "gibs" for the cover, to be presently described. Across the plate, A, below the guides, *a'*, I prefer to form a crimped ledge, *a*², to constitute a seat and closure for the lower edge of the guard cover, and below this, the plate may be extended into any ornamental terminus, *a*³.

In the body of the plate between the side-guides, *a'*, are perforations, *p*, for screws by which it may be attached to the instrument; and a series of rectangular tongues, *t*, are punched out and bent over backward into hooks as shown. The plates will generally be made of brass or German silver, or similar metal, which is hardened and toughened by bending; so that the tongues, *t*, when bent backward to form hooks, not only have the proper form and relations to the body of the plate best adapted to resist the pulling strain of the strings, but are by the toughening process described, rendered proof against yielding under such strain.

The guard or cover is a correspondingly rectangular plate, B, having forward extension, *b*, bent substantially at right angles and cut to any ornamental form desired. The plate B, is also provided with flaps, *b'*, *b'*, at the sides of the rectangular portion, bent at right angles in substantially parallel lines under the extension, *b*, and adapted to engage over and outside the flaps, *a'*, *a'*, of the string plate as shown in Fig. 1, completely covering the string plate except as to its lower orna-

mental extension a^3 . When in position, the extension, b , of the guard or cover, B, extends forward as a smooth plate over the face of the instrument over the rear ends of the strings, thus protecting them, and also protecting the arm or hand of the performer from contact therewith. In mandolins, particularly, where steel wire strings are used, and the rear loops are formed by twisting the free end about the body of the string forward of its holding connection, some protection is necessary to protect the sleeve of the player from being torn or injured by the exposed ends of the strings; and the plate, B, formed as described, not only serves this purpose, but extends the protection of a smooth plate with bent edges over and around the string plate also. The plate, B, it will be observed, is completely detachable: and it may be further explained that the guide flaps or "gibs," a' , of the string plate while approximately parallel, are made to flare slightly outward and diverge slightly from top to bottom, so that in slipping the plate, B, downward to place, it draws the guide flaps, a' , back toward true

parallelism against their own resiliency: and thus a secure retention is effected and any rattling of parts absolutely prevented.

The plates, A, B, are both struck up from sheet metal by suitable dies by simple and inexpensive operations, and are thus exceedingly inexpensive in construction.

I claim as my invention and desire to secure by Letters Patent of the United States—

The combination of a string holder provided with side flaps or gibs as described, with a covering plate provided with corresponding flaps or gibs and adapted to pass over and engage with the string plate in a sliding engagement and be held by an outward resilient pressure, as a bracket-support for the guard-extension of the covering plate substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HOWARD E. WURLITZER.

Witnesses:

L. M. HOSEA,

LONDON FREYBLER.