

UNITED STATES PATENT OFFICE.

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OF SAME PLACE.

BANJO.

SPECIFICATION forming part of Letters Patent No. 447,947, dated March 10, 1891.

Application filed February 26, 1889. Serial No. 301,265. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. DURKEE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Banjos, of which the following is a specification.

A prominent feature of my invention consists in utilizing the straining-rim of a banjo as a string-holder in place of employing as a string-holder a tail-piece attached to the banjo-body. To such end I provide the annular straining-band with a suitable number of string-receiving openings whereby the strings can be carried two or more times through the openings and over the top edge of the rim, so as to relieve the knots from strain, as hereinafter more particularly set forth.

As a means for concealing string-holders, both of the foregoing-described character and of other constructions in banjos, and also in other stringed musical instruments—such, for example, as mandolins—I provide, in connection with the body of the instrument, a guard arranged for covering the point whereat the strings are held. In connection with said guard, and as a further feature of improvement, I hinge the guard, and also provide a locking device, whereby it can be locked in position to cover and conceal the point whereat the strings are held, and also unlocked and thrown back, so as to permit the strings to be readily attached or detached, as may be desired.

In connection with a bolt extending through the banjo-body only at one side thereof and engaging in a bearing in the neck I provide a nut, which receives and conceals the end of the bolt that extends a short distance within the space that is bounded by the annular banjo-body, thereby dispensing entirely with the rod that usually extends entirely across the body of the banjo. I also provide the neck with one or more jam or push pins, which by the action of cams or wedges can be thrust against the banjo-body in a manner to insure perfect rigidity in the connection between the body and the neck of the instrument. I also stiffen and brace the banjo-body along a portion of its side that is at-

tached to the neck, all as hereinafter more particularly set forth.

In the accompanying drawings, Figure 1 represents a bottom plan view of a banjo embodying my invention. Fig. 2 represents a longitudinal central section of the same. Fig. 3 represents a section taken through a portion of the neck and body, the plane of said section being indicated by line 3 3 in Fig. 4. Fig. 4 represents a longitudinal section centrally through a portion of the neck and body on a plane coincident with the longitudinal middle of the neck. Fig. 5 represents in perspective a portion of the banjo-body with the guard thrown back. Fig. 6 represents a section taken transversely through the straining-band and shows one of the strings threaded twice through an opening in said band and carried once over the upper edge thereof.

In said drawings, A indicates as a whole the banjo-body, B the neck, and C the parchment head, which may be stretched over and held upon the circular body A in any suitable manner, the usual way being to stretch it over the hoop or rim *a* by means of the straining-band *a'*.

The strings D are at one end of the banjo attached to the tuning-pegs, as usual; but at the opposite end of the banjo the ends of the strings, which may be termed their "back ends," are attached to the straining-band *a'* in place of being attached to a device commonly known as a "tail-piece." The band *a'* is provided with a set of openings which are arranged adjacent to its upper edge and adapted to receive the several strings, which can be threaded through said openings and knotted at their ends to prevent them from being drawn entirely through the openings to which they are severally allotted. Said holes or openings are flared at their ends, so as to avoid such sharp edges as might tend to cut the strings, Fig. 6 serving to illustrate at E one of said string-retaining holes or openings in the band. The holes E are arranged as herein shown in order that any one or more of the strings can be carried over the top edge of the band and threaded twice or more than twice through its allotted opening,

as in Fig. 6, it being observed that by such arrangement considerable tension is taken off of the knots, and hence any liability of the knots being pulled out will be avoided.

5 Should the strings rest at all upon the parchment head, they will bear upon such portion as is directly upon the wire or hoop *a*, where-
by the strings will not be in contact with the vibratory portion of the parchment head, and
10 hence will not interfere with its vibration.

If preferred, a pad *F* can be arranged as a bearing for the portions of the strings that are just in front of the string-holding portion of the band; but such pad can be omitted
15 without a departure from my invention.

As a means for concealing the knotted ends of the strings, I attach to the body of the instrument a hinged cover or guard *G*. This guard is preferably hinged to the instrument,
20 so that it can be thrown back, as in Fig. 5, when it is desired to string the instrument, and after the strings have been attached the guard can be thrown forward, so as to cover and conceal the portion of the instrument to
25 which the strings are directly attached, it being understood that by hinging the guard to the string-holder or other portion of the instrument it will when removed from over the point whereat the strings are held be still attached to the instrument, and hence in readi-
30 ness to be again conveniently placed in position to cover the ends of the strings. Broadly considered, however, I claim a guard arranged to cover the point whereat the strings are held regardless of the mode of attachment of the
35 guard and whether the instrument be a banjo or mandolin or like instrument requiring a tail-piece or a string-holder such as herein set forth. The guard *G* can also be locked in its position over the string-holding portion of the banjo, and as a simple way of attaching the guard to the banjo and of locking it in its forward position said guard can be hinged to a plate *g*, that is secured by screws or the
45 like to the band *a'*, and said plate can be provided with a button or thumb-screw *g'*, to which a partial turn can be given after its flattened head has been received through an opening *g²* in the guard, as illustrated in
50 Fig. 2.

The guard *G* can be economically formed by striking up a sheet-metal blank into proper shape, it being preferable to bend it into substantially the angular shape shown, so that
55 it will conceal both the knotted ends of the strings and such portion of edge of the rim as any of the strings may be drawn over. It will also be observed that should the pad *F* be used it will also be concealed by the guard.

60 Broadly considered, the apertured portion of the straining-band constitutes a string-holder which can be covered and concealed by a guard *G*, that is hinged to the body of the instrument and suitably shaped with reference to the string-holder that it is to cover.
65 The guard *G* can also be attached to other stringed instruments and employed for cover-

ing other constructions of string-holders, as evidenced by my application, Serial No. 299,209, for Letters Patent, in which said applica-
70 tion the guard is shown employed in connection with a mandolin. In my said application the guard is hinged upon a string-holder, and such may be said to be the case in the present instance, since the band *a'*, while serving
75 other purposes, also provides a string-holder. Obviously, however, the guard could, if desired, be hinged upon some other portion of the body of the instrument.

The inner or back end of the neck *B* terminates at and abuts against the body of the instrument, said end of the neck being concaved in conformity with the shape of the hoop *a*, and being also notched or provided with an offset to receive the band *a'*. As a
80 means for holding the neck and body together, the back-end portion of the neck is bored longitudinally to receive a short bolt *H*, which enters said bore in the neck, and also extends through an opening that is provided in the hoop *a* and arranged in register with the bore in the neck. The bolt *H* is threaded at both ends, one of its said ends being screwed into a cap-nut *I*, that is held in a socket *b* within the neck, while its oppo-
90 site end extends but a short distance within the space of the head and receives a cap or knob *K*. The knob *K* has a threaded socket which receives and conceals the inner threaded end of the bolt, and said knob can
95 be tightened up against the hoop so as to hold the hoop and neck together. After the nut *I* has been let into the neck the recess *b* can be closed by a plate *b'*, which, as seen in Fig. 1, serves to ornament rather than detract from the appearance of the instrument. As auxiliary to the foregoing-described means for holding together the neck and body of the instrument one or more screws *L* can be employed for attaching the hoop to the neck.
100 It being essential to the desired sound of the instrument to preserve absolute rigidity between the neck and body, I provide in the back-end portion of the neck one or more, but preferably a couple, push bars or pins
105 *M*, which can be forced against the body by cams or wedges *N*. The push-pins are arranged to slide in bores or recesses formed longitudinally in the neck, and the wedges are arranged to slide in recesses *b²*, that are
110 formed transversely in the neck and in communication with the bores wherein the push-pins are arranged. The cams or wedges can be operated by screws *P*, which work in the cup-shaped bearings *P'*. Said bearings close
115 the entrances to the recesses *b²* and at the same time permit the screws to be reached by a small screw-driver or like instrument. By properly operating the screws *P* the cams or wedges can be adjusted in a way to thrust
120 the push-pins against the body of the banjo, and hence insure greater rigidity in the connection between the two.

I find it particularly desirable to give the

hoop an extra stiffness or rigidity along that portion of its side to which the neck is secured, and to such end I fit against the inner side of the hoop *a* one or more but preferably a single comparatively stout brace or reinforcing plate R, which fits throughout its length against the inner side of the hoop. The screws L, where employed, can serve as means for holding the brace-plate against the body; but as a means for insuring a solid connection between the brace-plate and hoop I utilize two or more but preferably two of such screws or bolts as may be provided for holding the brackets upon the hoop, as at S and S'. The brace-plate also provides the body of the banjo with an increased bearing for the bolt H.

What I claim as my invention is—

1. A banjo having its straining-band *a'* provided with a set of string-holding openings, substantially as set forth.

2. In a stringed musical instrument such as set forth, a movable guard for covering and concealing and uncovering the point whereat the strings are held.

3. The combination, with a stringed musical instrument such as set forth, of a hinged guard, and arranged for covering and concealing the point whereat the strings are held, substantially as described.

4. The combination, with a stringed musical instrument, of the hinged guard and a locking device to hold the guard in position

to cover the string-holder, substantially as described.

5. The combination, with the string-holder of a musical instrument such as set forth, of a guard made separate from the string-holder and adapted to cover and conceal the knotted ends of the strings.

6. The combination, with the banjo neck and body, of one or more push-pins M, arranged to bear against the body, and one or more wedges N, arranged for forcing said push pin or pins against the body, substantially as set forth.

7. The combination, with the banjo neck and body, of one or more push-pins M, one or more wedges N for forcing said pin or pins against the body, and one or more screws for adjusting said wedge or wedges, substantially as described.

8. The combination, with the hoop or rim in a banjo-body, of the brace-plate R, fitted throughout its length against the inner side of said hoop at a point opposite the connection between the hoop and the neck, substantially as described.

9. The combination, with a banjo, of a guard adapted for covering and concealing the knotted ends of the strings and held upon the rim of the instrument.

GEORGE B. DURKEE.

Witnesses:

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ANNIE COATES.