Jan. 26, 1943. W. J. SMITH ET AL 2,309,082

GUITAR AND GUITAR NUT

Filed Aug. 12, 1941

Fig. 1

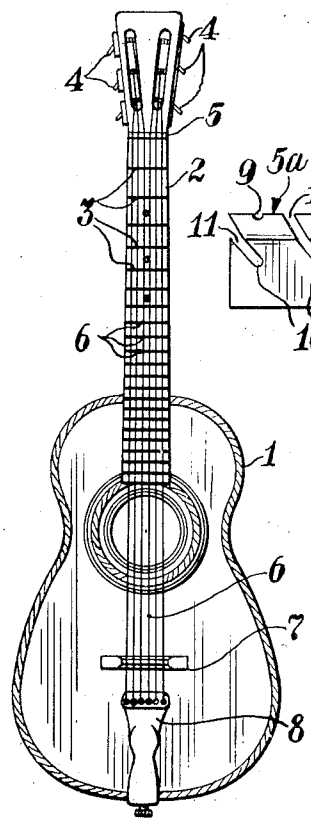


Fig. 3

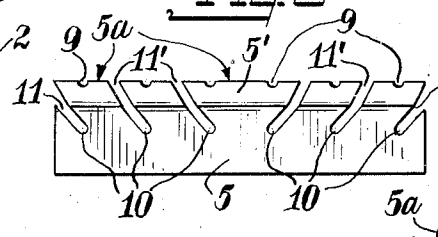


Fig. 2

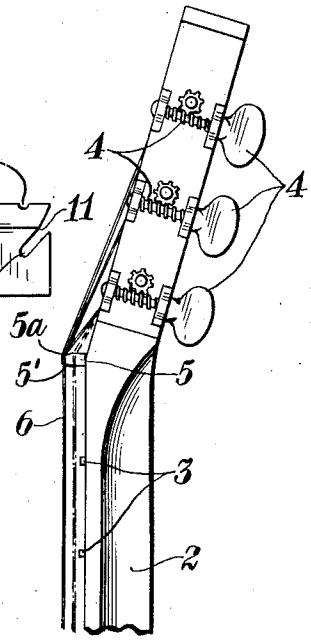


Fig. 4

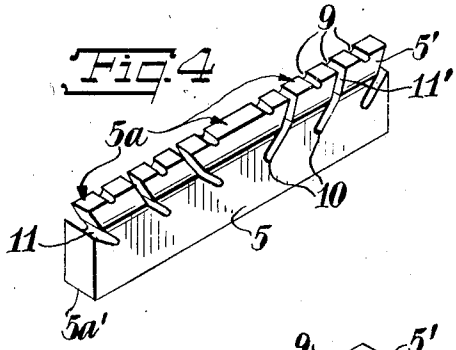


Fig. 5

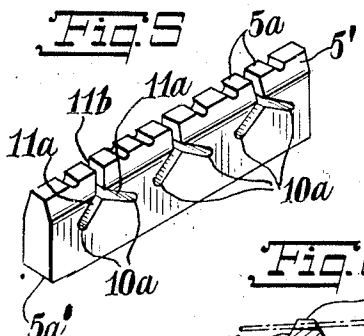


Fig. 6

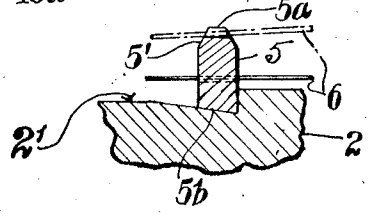
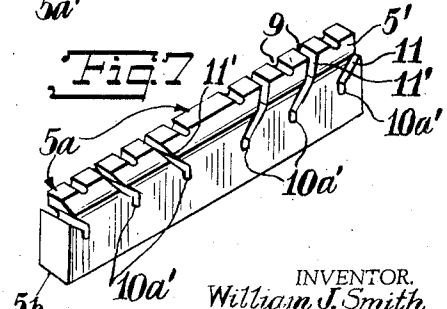


Fig. 7



INVENTOR.
William J. Smith
& George H. Smith
BY Joseph A. O'Brien
ATTORNEY

Patented Jan. 26, 1943 2,309,082

UNITED STATES PATENT OFFICE

2,309,082

GUITAR AND GUITAR NUT

William J. Smith, Port Washington, and
George H. Smith, Flushing, N. Y.

Application August 12, 1941, Serial No. 406,466

4 Claims. (Cl. 84—314)

This invention relates to guitars, and guitar-nuts, and one of the objects thereof is the provision in a conventional guitar, of a single nut that may be permanently secured to the neck of the guitar so as to be maintained in fixed position thereon and that will be capable of securely supporting the strings in either of two alternate positions, in one of which positions the guitar will be adapted to be played in Spanish style and in the other position will be adapted for playing in Hawaiian style, thus producing what we shall term "a dual-style nut" and a "dual-style guitar."

Another object of this invention is, in a conventional guitar, to provide a dual-style nut having alternate supporting notches for each of the strings that will be maintained in permanently fixed relative positions.

Another object of our invention is to provide in a dual-style nut, a series of pairs of string-supporting notches in which the alternate members of a pair of notches will be maintained in true vertical alignment with each other.

Another object of our invention is to provide a dual-style nut by the use of which the strings may, with a minimum of effort, be changed from one series of notches to the other so as to adapt the guitar to the playing of one type or style of music or the other.

Another object of our invention is to produce a dual-style nut comprising a single piece that will be substantially unbreakable.

Another object of our invention is to provide a nut comprising a body having a series of Spanish-style notches located within its body and communicating with the surface of said body by string-passing channels arranged in upwardly-disposed oppositely-inclined groups disposed at opposite sides of the middle of the nut body, and a series of elevated Hawaiian-style string-engaging notches located on its upper surface directly above and preferably in true vertical alignment with the Spanish-style notches.

With these and other objects in view the invention comprises the combination of members and arrangement of parts so combined as to co-act and co-operate with each other in the performance of the functions and the accomplishment of the results herein contemplated, and comprises in one of its adaptations the species or preferred form illustrated in the accompanying drawing, in which:

Fig. 1 is a view in plan of a conventional guitar to which our dual-style nut is secured;

Fig. 2 is a view in side elevation of a portion of the neck of a guitar showing our dual-style nut applied thereto, one series of strings being illustrated in full lines and the other in dot and dash lines;

Fig. 3 is a view in front elevation of a nut of our invention adapted to be applied to a conventional guitar;

Fig. 4 is a perspective view of the nut shown in Fig. 3;

Fig. 5 is a perspective view of a modified form of nut embodying our invention;

Fig. 6 is a fragmentary section of our improved nut mounted on the neck of a guitar and showing the alternate string positions; and

Fig. 7 is a perspective view of a nut having an inclined bottom to fit guitar necks having inclined supporting surfaces, and vertical notches at bottom ends of string-passing channels.

Referring now to the accompanying drawing and particularly to Figs. 1 to 4 and also 6 and 7, which illustrate a preferred embodiment of our invention, 1 indicates a guitar body having the conventional neck 2 provided in its upper surface with frets 3 and having keys 4 suitably mounted thereon. Our improved nut 5 is positioned in the usual place between the keys and frets and a set of six strings 6 pass from keys and through one of two series of notches in the nut 5 and thence along the upper surface of the neck over and across the frets, body and bridge 7 to the bottom or lower end of the body where they are conventionally secured to the body by the tail piece or member 8.

Our improved nut 5 may be formed of any suitable material, such as a suitable moldable condensation product, a suitable metal or an oblong block of hard wood. As illustrated, it has beveled corners 5' extending to an upper surface 5^a which is provided with a series of string-engaging surface notches 9. The height of the nut and said upper surface 5^a and the shallow surface notches 9 therein are such as to cause the strings, when properly tightened, to be sufficiently raised or elevated off the frets to enable note-stopping along the neck at the frets by the use of a bar and thus to produce an instrument adapted to play music in the conventional Hawaiian style. The aforesaid notched top surface is so elevated above the bottom surface of the nut as to produce sufficient height and body in the nut to permit the provision in said body of a lower set of under-surface notches adapted to support the strings in positions close to or just above the frets so as to adapt the instrument for the playing of music in the conventional Spanish style by direct fingering or note-stopping at the frets.

In the preferred embodiment of our invention illustrated in Figs. 3, 4, 6 and 7, the Spanish-style notches comprise a lower under-surface set of six string-supporting notches 10 which are positioned on a level about half way between the top and bottom surfaces of the nut. In said preferred embodiment of our invention, each of these notches 10 is disposed in vertical alignment with one of the elevated Hawaiian-styled surface

notches 9. Also, in said preferred embodiment, each of the under-surface notches 10 is provided with string-passing channels communicating with the surface of the nut. As illustrated, the end notches are provided with inclined string-passing channels 11 leading from the under-surface string-supporting notches at the ends of the nut to the opposite end surfaces of the nut, while the notches 10 between such end-notches are provided with inclined string-passing channels 11' leading from said under-surface string-supporting notches 10 to the upper surface 5a and intersecting said surface at positions between the several members of the set of elevated surface notches 9. In said preferred form of our invention, three of the string-passing channels at one end of the nut that receive the heavier strings of the instrument are inclined in one direction toward the middle of the nut and the other three string-passing channels for the lighter strings are inclined oppositely and extend from the surface toward the middle of the nut.

We thus provide a nut having, under its surface, notches for Spanish-style playing; and surface notches for Hawaiian-style playing that are elevated above the normal level of Spanish-style playing notches and positioned in alignment therewith. The elevated notches are provided with symmetrically-arranged string-passing channels which are distributed over the nut surfaces including the ends of the nut. These string-passing channels are thus embodied in the nut without materially weakening the structure thereof so that it will be strong and durable.

In Fig. 5, we have illustrated a modified form of our invention in which the under-surface notches 10a are arranged in pairs and each pair is provided with inclined string-passing channels 11a leading to a common vertical surface-intersecting channel 11b. In other respects, this nut is similar to that hereinabove shown and described.

In Figs. 4 and 5, we have illustrated a construction in which the bottom 5a' is composed of a single angularly disposed surface adapted to fit the joint at the neck of the guitar so as to enable the same to be used de novo on a new guitar, while in Fig. 7, we have shown a bottom portion 5b provided with an inclined surface adapted to fit an inclined nut-supporting surface such as is sometimes encountered on guitars, and vertical notches 10a' at the bottom 10 of the inclined channels 11.

In Fig. 6, we have shown a nut 5 in section mounted on the guitar neck 2 illustrated in fragmentary section, the nut-supporting surface of one form of such guitar neck being shown in full lines at 2'.

The operation of this nut and the application of the strings thereto will be obvious to any player of this type of instrument, but we may say that in order to change or convert the guitar from an instrument for Spanish-style playing to an instrument for Hawaiian-style playing, all that is necessary is to slightly loosen the strings 6 through the keys 4 and then to elevate and move sidewise the individual strings until they enter the elevated string-supporting notches. A tightening manipulation of the keys will then cause the strings to be supported in the elevated Hawaiian-style notches. To reconvert the guitar to an instrument for Spanish-style playing, a reverse sidewise movement of the strings will be necessary. In this case, the strings will move down along the inclined string-passages of the channels to the under-surface notches, whereupon the guitar will be converted to an instrument adapted to be played in accordance with the Spanish-style of playing.

It will be seen from the above that we have produced a dual-style guitar and nut that is quickly and easily convertible from one form to another without removal or reattachment of a nut and without any adjustment of the nut or the notches therein in relation to the frets, but on the contrary, we provide two sets of alternate fixed notches which are always properly and permanently spaced from the frets and in position to perform their proper functions.

Having described our invention, we claim:

1. A dual-style nut comprising a string-supporting member adapted to rest upon the neck of a musical instrument and having a series of alternate string-supporting notches, one of such series being body notches located in fixed position under the top edge and within the body of the nut between the top and bottom edges thereof, and the other being top-edge notches elevated above said body notches in the top edge of the nut, said nut being provided with string-passing channels extending from an edge of the nut to said body notches.

2. A dual-style nut comprising a string-supporting member adapted to rest upon the neck of a musical instrument and having a series of alternate string-supporting notches, one of such series being body notches located in fixed position under the top edge and within the body of the nut between the top and bottom edges thereof, and the other being top-edge notches elevated above said body notches in the top edge of the nut, said nut being provided with string-passing channels extending between the top edge of said nut and said body notches.

3. A dual-style nut comprising a string-supporting member adapted to rest upon the neck of a musical instrument and having a series of alternate string-supporting notches, one of such series being body notches located in fixed position under the top edge and within the body of the nut between the top and bottom edges thereof, and the other being top-edge notches elevated above said body notches in the top edge of the nut, said nut being provided with string-passing channels extending in downwardly-inclined position between the top edge of said nut and said body notches.

4. A dual-style nut comprising a string-supporting member adapted to rest upon the neck of a musical instrument and having a series of alternate string-supporting notches, one of such series being body notches located in fixed position under the top edge and within the body of the nut between the top and bottom edges thereof, and the other being top-edge notches elevated above said body notches in the top edge of the nut, said nut being provided with string-passing channels extending between the top edge of said nut and said body notches in downwardly inclined position from the said top edge of the nut, and also being disposed in groups extending toward the middle of the block, and each group having an end channel extending to the end edge of the nut.

WILLIAM J. SMITH.
GEORGE H. SMITH.