Fig. 6

A'1 101 00 0000
MINOR
SEVENTH MAJOR
9 8 7 6 5 4 3 2

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ABSTRACT OF THE DISCLOSURE

A guitar adapted to be played by a standing musician has tensioned strings in a plane inclined downward and away from the musician and has a body wedge-shaped in cross-section transverse to the direction of the strings and neck, so that the thin side of the body may fit under the arm of the musician.

This invention relates to musical instruments of the lute type in which strings are tensioned over a bridge and a nut. The invention will be described in connection with guitars of the Spanish type and Hawaiian type, but it is to be understood that this is by way of illustration and not of limitation.

Conventional Spanish type guitars are commonly played by a musician while in standing position. The musician plucks or strums the strings with his right hand while forming chords by pressing the fingers of his left hand against the strings. This type of instrument has great appeal for entertainers because the motions of the hands of the musician are plainly visible to the audience, and because the musician may walk about the stage while playing the instrument.

The conventional Hawaiian type guitar, on the other hand, must be played while the musician is sitting down, because the musician's left hand is used to slide a metal bar along the length of the strings while the strings are plucked or strummed by fingers of the right hand. The conventional Hawaiian type guitar cannot be played while the musician is standing, because the strings then lie in a substantially vertical plane and it is not possible to operate the slide bar properly when the plane of the strings is vertical.

Accordingly, it is an important object of this invention to provide a Hawaiian type guitar which is played with a bar sliding on the strings and which may be played by a musician in standing position. Another object is to provide a guitar of either Spanish type or Hawaiian type having a body portion of novel shape which facilitates holding of the instrument by the standing musician.

These and other objects of the invention are achieved by slanting the plane of the strings with respect to a face of the body of the guitar, so that when the body of the guitar is held in an upright position by a standing musician, the plane of the strings is placed at an angle to the vertical.

In the drawings,

FIGURE 1 shows a guitar being played by a musician while in standing position.

FIGURE 2 is a front elevation of the guitar shown in FIGURE 1.

FIGURE 3 is a transverse sectional view taken substantially on the lines 4—4 as shown in FIGURE 2.

FIGURE 4 is a sectional view taken substantially on the lines 4—4 as shown in FIGURE 2.

FIGURE 5 is a diagram showing the pattern of the lateral spacing of the strings and showing the manner in which the strings are tuned in relation to a piano keyboard.

FIGURE 6 is a plan view of the fretboard.

FIGURE 7 is a front elevation showing a modification.

FIGURE 8 is a sectional view taken substantially on lines 8—8 as shown on FIGURE 7.

FIGURE 9 is a sectional view taken substantially on lines 9—9 as shown on FIGURE 7.

Referring to the drawings, the guitar generally designated 10 is supported by a strap 11 passing over the shoulder of the musician, the musician being shown in standing position in FIGURE 1. The guitar 10 has a body 12 provided with a flat rear face 13 and a substantially parallel front face 14. A longitudinal groove 15 extending in a shoulder 16 is provided in the front face 14. An integral stem 17 has a rib 18 on its lower face which extends into the groove 15 and has marginal faces 19 which rest on the upper face 14 of the body 12. The stem 17 is secured to the body 12 by means of one or more fastenings 20. The stem 17 includes a neck 21 having an inclined surface 22 to which a fretboard 23 is attached. An inclined nut 24 is mounted at one end of the fretboard adjacent the tuning head 25 having the string tightening units 26. An inclined bridge 27 is mounted on the stem 17 near the other end of the inclined surface 22, and a string anchor device 28 is also fixed on the stem 17. The strings 1—9 are tensioned over the inclined nut 24 and bridge 27 and each string extends to one of the string tightening units 26 on the tuning head 25. It will be observed that the tension of the strings is resisted solely by the stem 17 and is not imparted to the body 12. The common plane of the string-contacting parts of the nut 24 and bridge 27 is inclined with respect to the parallel planes of the body faces 13 and 14. The inclination of the nut 24 and bridge 27 is such that the plane of the strings is at an angle to the vertical when the body surface 13 is held in a vertical position in contact with the body of the musician.

An electrical pick-up microphone unit 29 of conventional design is mounted on the inclined surface 23 of the stem 17 and is provided with the usual volume control and tone control knobs 31 and 32. A conventional jack 33 is provided for reception of the usual plug and electrical cables (not shown), for connecting the pick-up unit 29 to a conventional amplifier and speaker (not shown).

The lateral spacing and tuning of the nine strings are shown in the diagram of FIGURE 5. In this diagram the first string is tuned to the D above middle C, the second string to the D one octave thereof, the third string to the B below middle C, the fourth string to the second G below middle C, the fifth string to the G below middle C, the sixth string to the Eb below middle C, the seventh string to the same D as the second string, the eighth string to the F below middle C, and the ninth string to the Ab below middle C. This tuning schedule for the strings applies before the slide bar 34 is touched to any of the strings. Accordingly, when strings 1, 2, 3, 4 and 5 are sounded by plucking or strumming, a major chord in the key of G is produced. A G minor chord may be sounded by sounding strings 4, 5, 6 and 7. A major chord in Bb plus the sixth of the scale is produced by sounding the strings 4, 5, 6, 7 and 8. This same chord is an inversion of a minor seventh chord. This unique stringing enables the musician to play chords and sequences of chords previously not possible with the conventional Hawaiian guitar, without skipping any strings. However, the sounding of groups of adjacent strings, without skipping any strings, produces these various chords in any key.

Strings 1 and 2 are tuned one octave apart, and strings 4 and 5 are tuned one octave apart. These two pairs of strings are closely positioned so that either pair may be sounded almost simultaneously. The close spacing of strings 4 and 5 and the wide spacing between strings 5 and 6 provide a reference for the musician, as well as a teaching aid for a student, so that the proper strings may be plucked or strummed to produce the desired chord.
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The fretboard 23 has an upper surface upon which there is provided a series of transverse lines 35 spaced at intervals along the length of the fretboard. The position of these lines 35 is such that when the strings are tuned in the manner set forth above and when the slide bar 34 is placed in contact with all of the strings directly above one of these lines, a chord in a desired key is produced by sounding certain of the strings. Moreover, these individual lines 35 carry indicia relating them to their respective chord root tones on the piano keyboard. Thus, two rectangular blocks 36 on opposite sides of one end of a line denote that the chord root tone corresponds to one of the black notes on a piano keyboard. For example, the first line at the beginning end of the series has a pair of rectangular blocks 36 adjacent the end of the line which underlies strings 1, 2, 3, 4 and 5. This indicates to the musician that when the slide bar 34 is placed in contact with the strings directly over this line, a sharp or flat is the root tone of the chord when strings 1, 2, 3, 4, 5 are sounded. The legend 37 on this line indicates that this particular black note of the piano is “A♭”. However, the other end of this first line in the series which underlies string numbers 6, 7, 8 and 9, does not have any blocks similar to the blocks 35. This indicates that the root note of the chord corresponds to a white note on the piano and the symbol 38 shows that the particular white note is “B.” Large block letter type symbols A, B, C, D, etc., are placed on lines corresponding to root tones of the chords formed by sounding the strings with the slide bar 34 contacting the strings and in position over the particular line.

While FIGURE 6 shows a light background with dark symbols, legends, blocks, etc., it is to be understood that this is for ease of illustration, and any contrasting tones or colors may be used including a black background with white lines, symbols, legends, blocks, etc.

In the modified form of the invention shown in FIGURES 7–9, the plane of the strings is inclined, as previously described, but this is accomplished by slanting the front surface 40 of the guitar body 41 with respect to the rear surface 42. In transverse cross-section, the body 41 is approximately wedge-shaped, as shown in FIGURE 8, so that when the rear surface 42 is held against the body of the musician the front surface 40 and the plane of the strings 43 are both inclined.

In this form of the invention the neck 44 is fixed by fastenings 45 to the central strut 46 extending through the interior of the body 41. The body shell forms an acoustical sound box and the usual opening 47 may be provided in the upper surface 48. An electrical pick-up microphone unit 49 may be mounted on the upper guitar body surface near the inner end of the neck 44.

The thin side 49 of the body 41 may conveniently fit under the arm and against the body of the musician, the thick side of the guitar body facing downward.

I claim:

1. In a guitar, the combination of: a body having a front surface and a rear surface, a neck extending from one end of said body, said body being approximately wedge-shaped in cross-section transverse to the length of said neck, to form a thin side and a thick side, strings tensioned over the body and the neck inclined in a common plane, so that the thin side of said body may fit under the arm of a standing musician, with the plane of the strings inclined downward and away from the musician.

2. The structure of claim 1 in which the body comprises a hollow acoustic shell.

3. The structure of claim 1 in which the plane of the strings lies at an angle to said rear surface.

4. The structure of claim 1 in which the plane of the strings is parallel to said front surface.

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