

Sept. 14, 1965

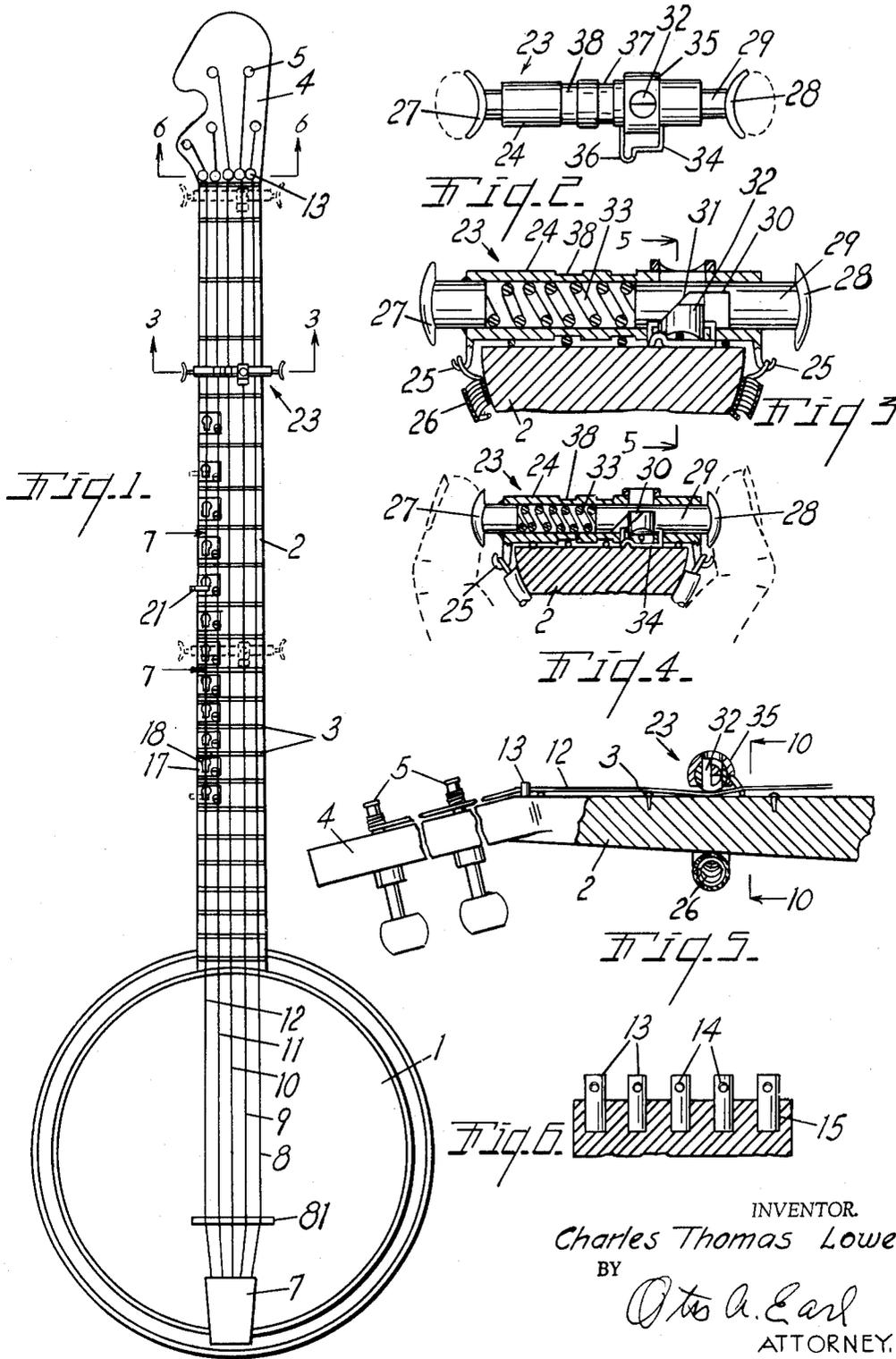
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3,205,751

MUSICAL INSTRUMENT

Filed Oct. 22, 1964

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

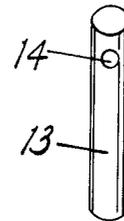
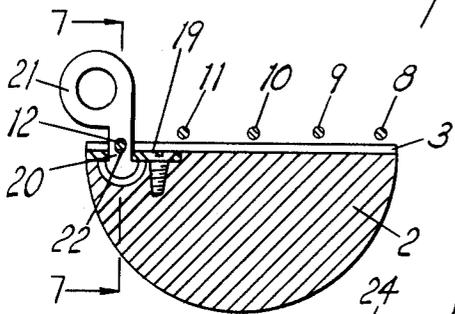
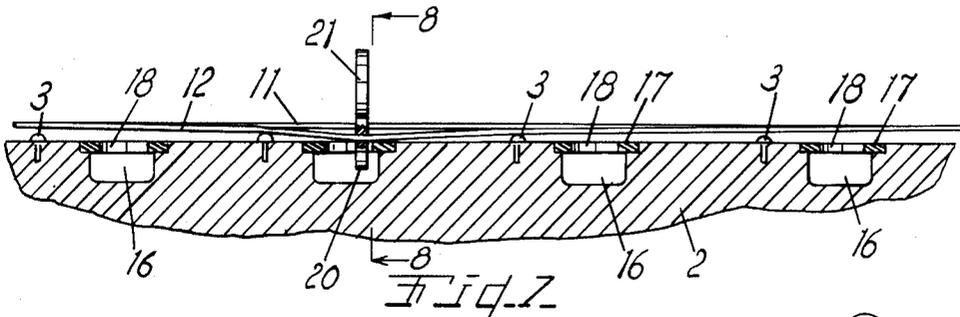


Fig. 12.

Fig. 8.

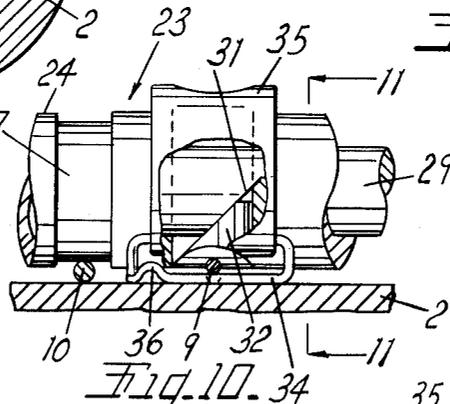


Fig. 10.

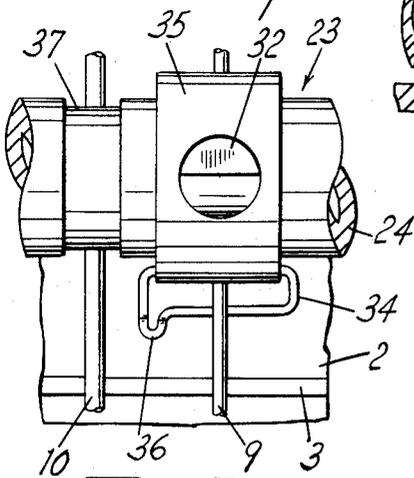


Fig. 9.

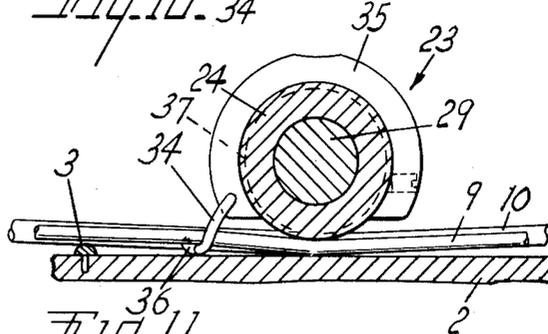


Fig. 11.

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3,205,751

MUSICAL INSTRUMENT

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19 Claims. (Cl. 84-318)

This invention relates to improvements in stringed musical instruments particularly of the plucked string type.

The main objects of this invention are:

First, to provide a stringed musical instrument of the plucked string type such, for example, as a banjo which includes means for producing a very wide tone variation.

Second, to provide a musical instrument of this type with the capotasto unit which may be very quickly and easily adjusted lengthwise of the neck and without disengagement therefrom and which includes a nut element operatively associated with at least one of the strings.

Third, to provide a stringed musical instrument with a capotasto unit using a nut member for one string and an associated fret member and means for simultaneously adjusting them to and from use position.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is defined and pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing, in which:

FIG. 1 illustrates a stringed musical instrument of the banjo type embodying my invention including the capotasto unit which is shown in one position by full lines and other positions by dotted lines.

FIG. 2 is a top view of the body portion of the capotasto unit embodying my invention, fingers in grasping position being conventionally illustrated by dotted lines.

FIG. 3 is an enlarged fragmentary view partially in section on a line corresponding to line 3-3 of FIG. 1.

FIG. 4 is a fragmentary view corresponding to FIG. 3 with portion of a hand grasping a capotasto unit preliminary to adjustment thereof.

FIG. 5 is a fragmentary longitudinal sectional view on a line corresponding to line 5-5 of FIG. 3.

FIG. 6 is a fragmentary view partially in cross section on a line corresponding to line 6-6 of FIG. 1 illustrating details of the post arrangement.

FIG. 7 is an enlarged fragmentary view on a line corresponding to line 7-7 of FIGS. 1 and 8.

FIG. 8 is a cross sectional view on a line corresponding to line 8-8 of FIG. 7.

FIG. 9 is an enlarged fragmentary plan view of the capotasto unit.

FIG. 10 is an enlarged fragmentary view on a line corresponding to line 10-10 of FIG. 5 with parts being broken away.

FIG. 11 is a fragmentary view in section on a line corresponding to line 11-11 of FIG. 10.

FIG. 12 is a perspective view of one of the nut members illustrated in FIG. 6.

It should be understood that in the drawings the applicant has illustrated some features which are the subject matter of his application for patent, Serial No. 205,268 filed June 26, 1962, and that such structural features are illustrated in this application for the reason that there is a functioning relation between these various parts which are developments of features of the pending application, being particularly true of the capotasto unit as will hereinafter be described.

In the accompanying drawing, FIG. 1 is a plan view of a stringed musical instrument of the banjo type, the body 1 being shown conventionally. The neck 2 is provided with a plurality of frets 3 varyingly spaced as is common practice in instruments of this type.

The neck is provided with a fixed or integral head 4 disposed in angular relation to the neck and is provided

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with posts 5 conventionally illustrated. The strings conventionally illustrated are attached to the tailpiece 7, the bridge 81 also being conventionally illustrated.

The embodiment of my invention illustrated further includes four conventional strings 8, 9, 10 and 11 and a fifth string 12. A separate nut 13 is provided for each string, these having bores 14 through which the strings are threaded, the nuts being separately supported in the bores 15 provided therefor in the neck. The neck is provided with a longitudinally extending series of peg socket recesses 16 disposed below the fifth string 12, see FIGS. 7 and 8.

Peg sockets 17 are inserted in the neck. The peg socket members 17 have keyhole-shaped slots 18 therein and are fixedly secured to the neck by the screws conventionally illustrated at 19, see FIG. 8. The slots 18 are adapted to receive the shank 20 of the adjustable peg 21, the shank having a hole 22 therein through which the string 12 is threaded. The openings of these socket members are of keyhole shape which enables the peg to be readily engaged therein and disengaged therefrom. It should be understood that the adjustable peg of the fifth string is substantially that illustrated in my pending application for patent as is also the nut element 13.

To provide tone adjustment for the strings 8, 9, 10 and 11, I provide a capotasto unit designated generally by the numeral 23 comprising a tubular body member 24 having downwardly projecting outwardly facing hook-like coupling members 25 at its ends with which the coiled spring 26 disposed on the underside of the neck is detachably engaged. This coiled spring 26 is slidable on the underside of the neck and is provided with a tubular cover. The body member 24 is tubular and is provided with a fingerpiece 27 at one end which is fixedly secured thereto. At its other end the body member is provided with a second fingerpiece 28 having an elongated stem 29 slidably supported in the body member to be reciprocated therein. The stem 29 has a downwardly facing recess 30 terminating at its inner end in an outwardly and downwardly facing cam 31 which coacts with the nut member 32 slidably mounted in the body member for adjustment laterally thereof, that is to and from the neck. The coil spring 33 is supported in thrust engagement with the stem of the fingerpiece 27 with its other end in thrust engagement with the stem of the second fingerpiece 28, see FIGS. 3, 4, 5, 9, 10 and 11.

In the embodiment illustrated the fret member 34 is pivotally mounted on the collar 35 which is mounted on the body member in supported embracing relation thereto as is most clearly illustrated in FIGS. 9, 10 and 11. The fret member 34, when in use position, is in supported engagement with the neck as is illustrated, however, when the fingerpieces are grasped for adjustment of the capotasto unit it is freed. It will be noted that the fret member 34 supports the string 9 so that it is not in engagement with the fret at the front of the capotasto unit. The spring 33, when the fingerpieces are released, acts to clamp the string 9 at the rear of the member 34 against the neck, see FIGS. 5, 10 and 11.

In the embodiment illustrated the fret member 34 is provided with an upwardly projecting tip or nose portion 36 which projects above the neck, see FIGS. 10 and 11, to engage and slide over frets 3 when the capotasto unit is slidably moved along the neck. The body member, in the embodiment illustrated, has annular grooves 37 and 38 of different depth to receive the strings of varying diameter. It is desired to point out that it is not necessary that the grooves be annular so far as strings are concerned but that it is desirable and the strings are not scrapingly engaged in the event the body member is tilted as it is slid along the neck.

With this arrangement of parts the capotasto unit may be repositioned merely by grasping the fingerpieces which releases the string 9 and allows the capotasto to be slidably and quickly adjusted along the strings to the desired position. One advantage of this arrangement is that the capotasto unit may be adjusted while the instrument is held in playing position. Another desirable feature is that in combination with the manually adjustable peg for the string 12 the parts may be adjusted to provide a very wide variation in tone. There is a substantial improvement in the capotasto unit over what is disclosed in my aforesaid pending application mainly from the structural and adjustment standpoint rather than from tone variation.

I have illustrated and described my invention in a highly practical embodiment thereof. I have not attempted to illustrate or describe other embodiments or adaptations as it is believed that this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described the invention, what is claimed as new and desired to secure by Letters Patent is:

1. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets, a head provided with string tensioning posts, a plurality of posts and strings, a capotasto supportedly mounted on said neck for adjustment longitudinally thereof and comprising a body member disposed transversely of the neck and above the strings and having rearwardly projecting hook-like lugs at its ends disposed at the sides of the neck, a spring disposed with its ends in engagement with said hooks and in sliding engagement with said neck and acting to hold said body member in its adjusted positions on said neck, said body member having a longitudinal bore therethrough, a first fingerpiece having a stem disposed in and fixedly secured in said bore at one end of said body member, a second fingerpiece having a stem slidably supported in the other end of said bore and having a downwardly facing recess therein conformed to provide a downwardly and laterally facing cam, a coiled spring disposed in said bore in said body member in thrust supported engagement with said stem of said first fingerpiece and in actuating engagement with the stem of said second fingerpiece, a nut member slidably mounted in said body member for adjustment laterally thereof and slidably engaging one of the strings and having a cam coacting with said cam of said second fingerpiece, and a fret member for the string engaged by said nut member mounted on said body member to project forwardly therefrom and acting to support the string engaged thereby in non-engaging relation to the frets on the neck at the front thereof.

2. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets, a head provided with string tensioning posts, a plurality of strings, and nut means operatively associated with said posts and strings, a capotasto supportedly mounted on said neck for adjustment longitudinally thereof and comprising a body member disposed transversely of the neck and above the strings, a spring connected at its ends to said body member and acting to hold said body member in its adjusted position on said neck, said body member having a longitudinal bore therethrough, a first fingerpiece having a stem disposed in and fixedly secured in said bore at one end of said body member, a second fingerpiece having a stem slidably supported in the other end of said bore and having a downwardly facing recess therein conformed to provide a downwardly and laterally facing cam, a coiled spring disposed in said bore in said body member in thrust supported engagement with said stem of said first fingerpiece and in actuating engagement with the stem of said second fingerpiece, a nut member slidably mounted in said body member for adjustment laterally thereof and slidably engaging one of the strings and

having a cam coacting with said cam of said second fingerpiece, and a fret member for the string engaged by said nut member mounted on said body member to project forwardly therefrom and acting to support the string engaged thereby in non-engaging relation to the frets on the neck at the front thereof.

3. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets, a plurality of strings, a capotasto supportedly mounted on said neck for adjustment longitudinally thereof and comprising a body member disposed transversely of the neck and above the strings, said body member having a longitudinal bore therein, a first fingerpiece disposed at and supportedly secured to one end of said body member, a second fingerpiece having a stem slidably supported in the other end of said bore and having a downwardly facing recess therein conformed to provide a laterally facing cam, a coiled spring disposed in said bore body member in thrust supported engagement with said stem of said first fingerpiece and in actuating engagement with the stem of said second fingerpiece, a nut member slidably mounted in said body member for adjustment laterally thereof and having a cam portion with which said cam portion of said second fingerpiece coacts, and a fret member for the string engaged by said nut member mounted on said body member to project forwardly therefrom and acting to support the string engaged thereby in non-engaging relation to the frets on the neck at the front thereof.

4. A stringed musical instrument of the class described including a neck provided with a plurality of frets, a plurality of strings, a capotasto unit supportedly mounted on said neck for adjustment longitudinally thereof and including a body member disposed transversely of the neck and above the strings and having a relatively fixed fingerpiece at one end thereof, a second fingerpiece having a stem slidably supported in said body member and having a downwardly and laterally facing cam, a nut member mounted in said body member for adjustment laterally thereof with which the cam portion of said fingerpiece coacts, a fret member for the string engaged by said nut member mounted on said body member to project therefrom in coacting relation to one string, and spring means disposed in said body member and acting to urge said cam to its string engaging position.

5. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets, a plurality of strings, a capotasto supportedly mounted on the neck for adjustment longitudinally thereof and comprising a body member disposed transversely of the neck above the strings, a first fingerpiece disposed at one end of said body member, a second fingerpiece having a cam member which is slidably supported at the other end of said body member, a spring disposed in said body member in thrust actuating engagement with said cam member, a nut slidably mounted on said body member for adjustment laterally thereof and having a portion with which said cam coacts, and a fret member for the string engaged by said nut member mounted on said body member to project forwardly therefrom and acting to support the string engaged by said nut member in non-engaging relation to the fret on the neck at the front thereof.

6. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets, a plurality of strings, a capotasto supportedly mounted on the neck for adjustment longitudinally thereof and comprising a body member disposed transversely of the neck above the strings, a first fingerpiece disposed at one end of said body member, a second fingerpiece having a cam member which is slidably supported at the other end of said body member, a spring disposed in said body member in thrust actuating engagement with said cam member, a nut slidably mounted on said body member for adjustment laterally thereof and having a portion with which said cam coacts, and a fret member for the string

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engaged by said nut member mounted on said body member to project forwardly therefrom.

7. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets and a plurality of strings, a capotasto unit supportedly mounted on said neck for adjustment longitudinally thereon and comprising a tubular body member disposed transversely of the neck above the strings, there being an opening in said body member on its underside above one of the strings, said body member having a fixed fingerpiece at one end thereof, a manually manipulatable member slidably supported at the other end of said body member and including a laterally facing cam, a nut member supportedly mounted on said body member for adjustment laterally thereof and with which said cam coacts, a fret member for the string engaged by said nut member supportedly mounted on said body member and acting to support the string engaged thereby in noncontacting relation to the frets on the neck at the front thereof, and a spring disposed within said body member and acting to actuate said nut member.

8. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets and a plurality of strings, a capotasto unit supportedly mounted on said neck for adjustment longitudinally thereon and comprising a tubular body member disposed transversely of the neck above the strings, there being an opening in said body member on its underside above one of the strings, said body member having a fixed fingerpiece at one end thereof, a manually manipulatable member slidably supported at the other end of said body member and including a laterally facing cam, a nut member supportedly mounted on said body member for adjustment laterally thereof and with which said cam coacts, a spring disposed within said body member and acting to actuate said nut member, and a fret member for the string with which said nut member is operatively associated mounted on said body member.

9. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets and a plurality of strings, a capotasto supportedly mounted on said neck for adjustment longitudinally thereof and comprising a body member disposed transversely of the neck above the strings and having a fingerpiece at one end thereof, a cam member adjustably mounted in said body member and provided with a fingerpiece at its outer end, a spring disposed in said body member in thrust engagement with said cam member, a string engaging nut mounted on said body member for adjustment laterally thereof and having a portion with which said cam member coacts, and a fret member for the string engaged by said nut member mounted on said body member to project therefrom and acting to support the string engaged by said nut member in noncontacting relation to the neck on the front thereof.

10. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets and with a plurality of strings, a capotasto unit supportedly mounted on said neck for adjustment longitudinally thereof and comprising a body portion disposed above and transversely of the strings and having an opening in its underside disposed above one of the strings, a manually releasable spring actuated string engaging member mounted in said body member to project through said opening and for adjustment laterally of the neck, and a fret member for the string with which said string engaging member coacts mounted on said body member to support the string engaged by said member in noncontacting relation to the fret on the neck at the front thereof.

11. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets and with a plurality of strings, a capotasto unit supportedly mounted on said neck for adjustment longitudinally thereof and comprising a body portion disposed above

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and transversely of the strings, a manually releasable spring actuated string engaging member mounted in said body member for adjustment laterally of the neck, and a fret member for the string with which said string engaging member coacts mounted on said body member to support the string engaged by said member in noncontacting relation to the fret on the neck at the front thereof.

12. A stringed musical instrument of the class described comprising a neck provided with a plurality of strings disposed longitudinally of the neck above said frets, a capotasto unit mounted on said neck for manual adjustment longitudinally thereof and comprising a body member disposed transversely above the strings, spring means acting to hold said body member in its adjusted positions on said neck, said body member having fingerpieces at its ends, one of said fingerpieces being adjustably engaged with said body member and provided with a cam, a nut member for one string supportedly mounted on said body member for adjustment transversely thereof and with which said cam coacts, and a fret member for the string with which said nut member coacts supportedly mounted on said body member, said body member being adjustable longitudinally of the neck by the grasping of said fingerpieces.

13. A stringed musical instrument of the class described comprising a neck provided with a plurality of strings disposed longitudinally of the neck above said frets, a capotasto unit mounted on said neck for manual adjustment longitudinally thereof and comprising a body member disposed transversely above the strings, spring means acting to hold said body member in its adjusted positions on said neck, said body member having fingerpieces at its ends, one of said fingerpieces being adjustably engaged with said body member and provided with a cam, a nut member for one string supportedly mounted on said body member for adjustment transversely thereof and with which said cam coacts, and a fret member for the string with which said nut member coacts supportedly mounted on said body member.

14. A stringed musical instrument of the class described comprising a neck provided with a plurality of strings disposed longitudinally of the neck above said frets, a capotasto unit mounted on said neck for adjustment longitudinally thereof and comprising a body member disposed transversely above the strings and having fingerpieces at its ends projecting laterally from the neck so that they may be grasped by a hand disposed below the neck, spring means acting to hold said body member in its adjusted positions on said neck, one of said fingerpieces being telescopingly engaged with said body member and being provided with a cam, a nut member for one string supportedly mounted on said body member for adjustment transversely thereof and with which said cam on said fingerpiece coacts, and a fret member for the string with which said nut member coacts supportedly mounted on said body member, said body member being adjustable longitudinally of the neck by grasping said fingerpieces.

15. A stringed musical instrument of the class described comprising a neck provided with a plurality of strings disposed longitudinally of the neck above said frets, a capotasto unit mounted on said neck for adjustment longitudinally thereof and comprising a body member disposed transversely above the strings and having fingerpieces at its ends projecting laterally from the neck so that they may be grasped by a hand disposed below the neck, spring means acting to hold said body member in its adjusted positions on said neck, one of said fingerpieces being telescopingly engaged with said body member, a nut member for one string supportedly mounted on said body member for adjustment transversely thereof and with which said adjustable fingerpiece coacts, and a fret member for the string with which said nut member coacts supportedly mounted on said body member.

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16. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets and with a plurality of strings disposed longitudinally of the neck above the frets, a capotasto unit mounted on said neck for adjustment longitudinally thereof and comprising a body member disposed above the strings and having fingerpieces at its ends, a nut member for one string supportedly mounted on said body member for adjustment transversely thereof, and a fret member for the string with which said nut member coacts pivotally mounted on said body member, one of said fingerpieces being spring actuated and having means coacting with said nut member for actuating it to string engaging position.

17. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets and with a plurality of strings, a capotasto unit slidably mounted on the neck for adjustment longitudinally thereof and comprising a body portion disposed transversely above the neck and the strings for sliding adjustment longitudinally thereof, a coil spring disposed on the underside of the neck in slidable engagement therewith and having its ends connected to the ends of said body member, said spring being provided with a tubular cover, and a fret member for one string pivotally mounted on said body member to project forwardly therefrom and having a forwardly projecting upwardly curved portion slidably engageable with the fret as the capotasto unit is slidably adjusted along the neck.

18. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets and

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with a plurality of strings, a capotasto unit slidably mounted on the neck for adjustment longitudinally thereof and comprising a body portion disposed transversely above the neck and the strings for sliding adjustment longitudinally thereof, a spring disposed on the underside of the neck in slidable engagement therewith and having its ends connected to the ends of said body member, and a fret member for one string pivotally mounted on said body member to project forwardly therefrom and having a forwardly projecting upwardly curved portion slidably engageable with the fret as the capotasto unit is slidably adjusted along the neck.

19. A stringed musical instrument of the class described comprising a neck provided with a plurality of frets and with a plurality of strings, a capotasto unit slidably mounted on the neck for adjustment longitudinally thereof and comprising a body portion disposed transversely above the neck and the strings for sliding adjustment longitudinally thereof, a spring disposed on the underside of the neck in slidable engagement therewith and having its ends connected to the ends of said body member, and a fret member for one string pivotally mounted on said body member to project forwardly therefrom.

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LEO SMILOW, *Primary Examiner.*