No. 831,238. PATENTED SEPT. 18, 1906.

S. PANELLI.

ATTACHMENT FOR GUITARS.

APPLICATION FILED FEB. 18, 1905.

2 SHEETS—SHEET 1.

FIG I

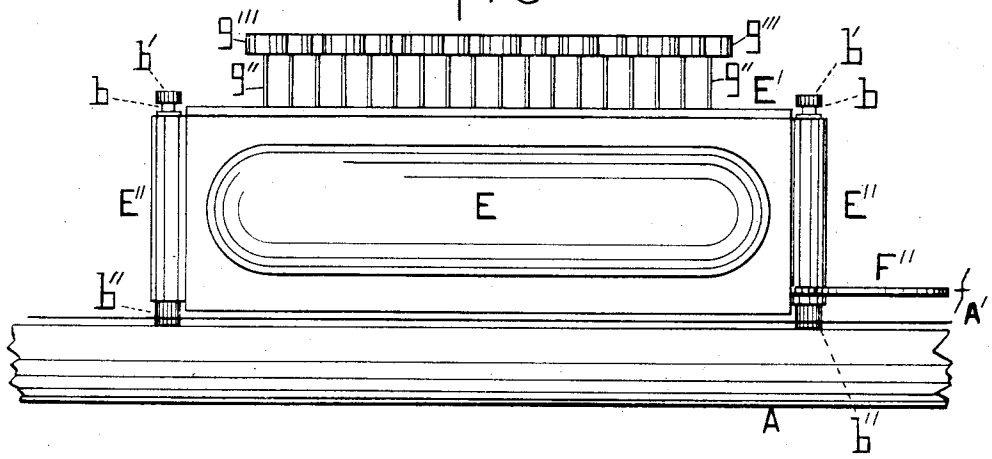


FIG II

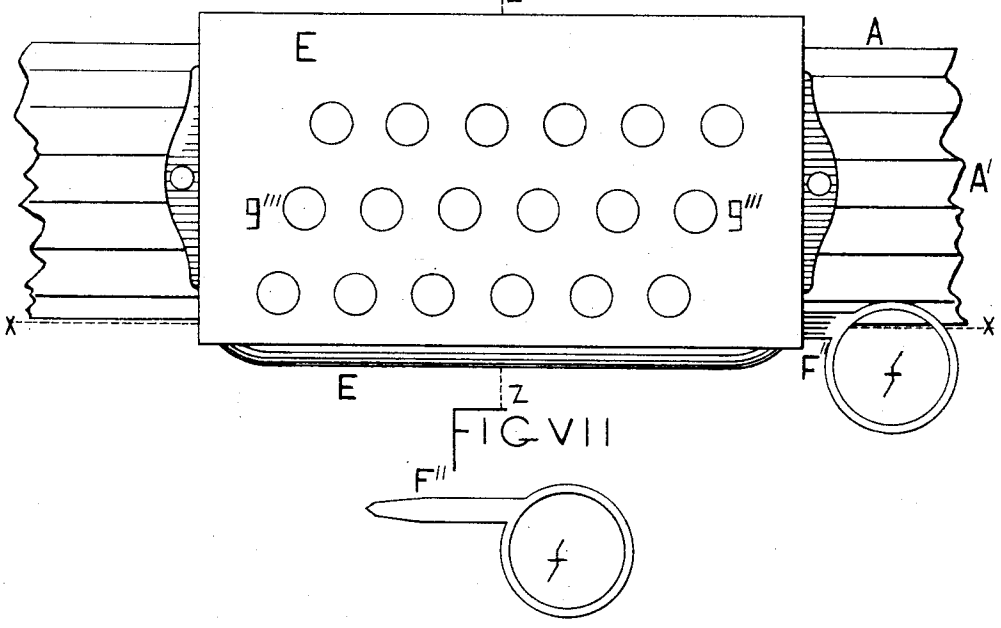


FIG VII

WITNESSES:
J. W. Bulmer.
M. O. Shipley

INVENTOR
Silvestri Panelli
BY
Clark Bremer & Co
ATTORNEYS.

THE NORRIS PETERS CO., WASHINGTON, D. C.

No. 831,238. PATENTED SEPT. 18, 1906.

S. PANELLI.

ATTACHMENT FOR GUITARS.

APPLICATION FILED FEB. 18, 1905.

2 SHEETS—SHEET 2.

FIG III

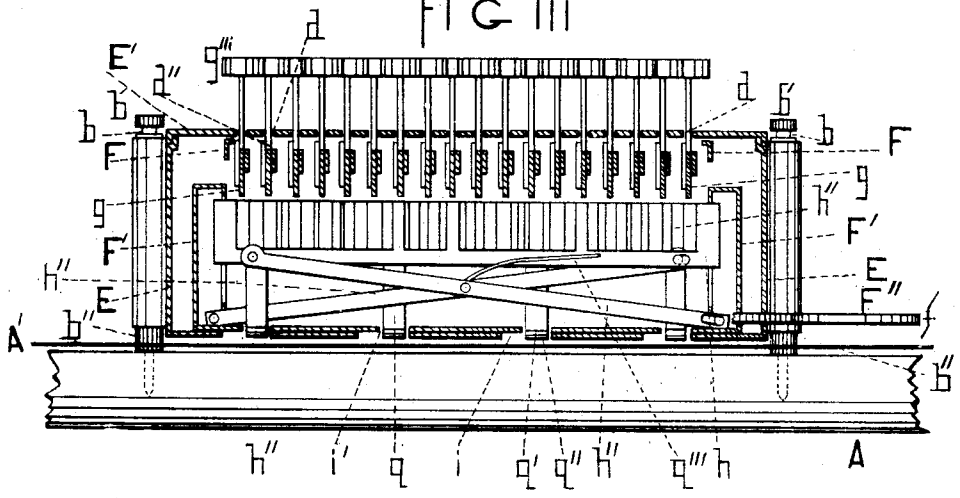


FIG IV

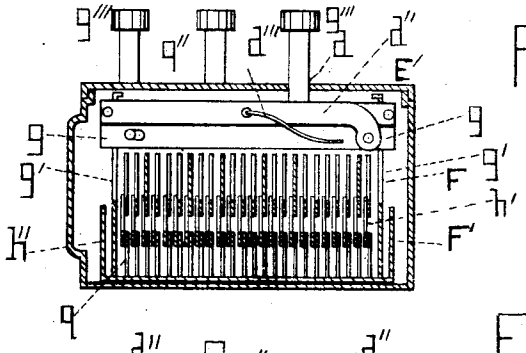


FIG V

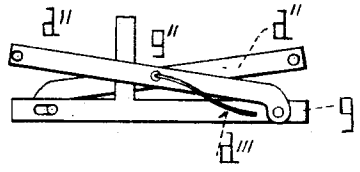
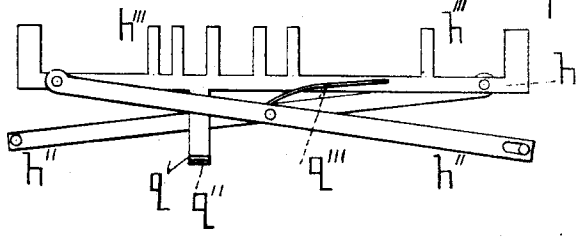


FIG VI



WITNESSES:

J. W. Bulmer.

H. Shipley

INVENTOR

Silvestri Panelli

BY

Clark Deemer & Co

ATTORNEYS.

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SILVESTRI PANELLI, OF NEW YORK, N. Y.

ATTACHMENT FOR GUITARS.

No. 831,238. Specification of Letters Patent. Patented Sept. 18, 1906.

Application filed February 18, 1905. Serial No. 246,334.

To all whom it may concern:

Be it known that I, SILVESTRI PANELLI, a citizen of the United States, and a resident of New York city, county of New York, and State of New York, whose post-office address is No. 518 East One Hundred and Forty-eighth street, have invented certain new and useful Improvements in Attachments for Guitars, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to improvements in attachments for guitars.

The invention has for its object to provide an efficient and inexpensive attachment for guitars by means of which a performer having comparatively little skill and experience will be enabled with comparatively little practice to play the instrument correctly.

The invention also has for its object to interpose a novel stop mechanism between the strings of the instrument and the fingers of one hand of the performer.

The invention also has for its object by means of the mechanism hereinafter described to enable the performer while playing to shift the operative part of said stop mechanism from the diatonic scale to the chromatic scale or from the chromatic scale to the diatonic scale at the pleasure of the performer without making any appreciable pause in the music.

The invention also has for its object to provide means whereby said device may be easily and quickly attached to the neck of the guitar and adjusted in proper operative position and as easily detached therefrom.

The invention also has divers other objects, which will be fully hereinafter set forth.

The nature of the invention will be fully understood from the following general description and the annexed drawings and will be substantially pointed out in the claims.

In the said accompanying drawings, Figure I is a side view of my invention attached to a part of the neck of a guitar. Fig. II is a top plan view of the same. Fig. III is a sectional view of the same, taken on the line $x\,x$ of Fig. II. Fig. IV is another sectional view of the same, taken on the line $z\,z$ of Fig. II. Figs. V, VI, and VII are views of details more fully hereinafter described.

A designates a part of the neck of a guitar.

E designates a casing having a removable top E′. This may be of any convenient and available contour; but I prefer the form here illustrated. The ends of this casing are bent to form grooves, (designated by E,) which as bearings accommodate the screws b, by which the device is fastened to the neck of the guitar. These screws are each provided at the top with a milled nut b' and have between the casing E and the guitar-neck milled nuts b''. These screws not only hold the said casing on the guitar-neck, but also hold the removable cover E′ on the casing. This cover is provided with convenient ears for that purpose. In the bottom of this casing are four transverse slots i, which nearly reach through the whole breadth thereof. In the removable cover are eighteen slots d, more fully hereinafter described. Within the casing E are two smaller casings F and F′. The higher casing F is stationary; but the lower casing F′ is arranged to slip a little endwise in the outer casing E. To accomplish this motion with facility, the handle F″ is provided. This is attached to the lower inner casing F′ and extending beyond the end wall of the outer casing terminates in the ring f. This handle may be placed at either end of the casing, as may be desired, either by the builder or the player. Within each of these inner casings is a plurality of sliding bars. In the higher casing these bars are designated by g. In the under casing they are designated by h. In the higher casing F these bars slide with their ends in slots g' in the side walls of the said casing F. In the lower casing F′ the slots to accommodate its sliding bars are in the end walls and are designated by h'. On each of the bars g is formed a stem g'', which extends upward through the slots d in the cover E′ and is surmounted by the finger-buttons g''', so that by pressing on one of the buttons it will cause its bar g to slide downward. To each of these bars g is attached two levers d''. These levers are pivoted together in the middle, pivoted each by one end to a bar g near its end and pivoted by the other end to the wall of the casing. The pivot-holes in the ends of these levers are slotted to allow them free action. A return-spring d''' is attached to each of these bars g and its levers. The function of these springs will be more fully hereinafter set forth. In the example of my invention here given I have shown eighteen of these levers with accompanying mechanism; but they may be of any required num-

ber. These bars *g* are arranged in their casing F transversely to the neck of the guitar on which they are placed. In the lower casing F′ there are also a plurality of bars *h* similar to those in the casing F, but differing in form and arranged parallel to the neck of the guitar. To each of these bars *h* is pivoted two levers *h″*, which are of the same form and arranged similarly to the levers *d″*, above described. On the upper edge of each of these bars is formed a plurality of stems *h‴*. These differ in width, are arranged at different distances apart, and extend upward far enough to be engaged by the downsliding bars *g*. On the lower edge of each of these bars *h* is a stem *q*, which reaches downward through a slot *i′* in the bottom of inner casing F′ and through one of the slots *i* in the outer casing E and terminates in a foot *q′*, which is shod with a soft surface *q″*. This shoe as it engages the strings of the guitar, as hereinafter described, may be of any available material; but I prefer to make it of felt. Each bar *h* and its levers are provided with a return-spring *q‴*. The function of this spring will be hereinafter explained. In the example of my invention here given I have illustrated twenty-four of these bars *h*, with accompanying mechanism; but they may be of any desired number.

To use my invention, the various parts are to be assembled as illustrated and described herein. The device is then fastened on the neck of a guitar by screwing the screws *b* into the neck between the two middle strings and the height of the bottom of the casing E above the strings regulated by turning nuts *b″* until the said bottom will not interfere with proper vibration. It will then be found that the upper series of bars *g* are arranged transversely to the neck of the instrument and the lower series of bars *h* parallel to it. The player then takes the instrument in his hands and holding it, as performers do, strikes the strings with the fingers of his right hand in the common way. At the same time he, as the melody requires, pushes down the finger-buttons *g‴* with the neck of the guitar resting on his left thumb. As he pushes down the finger-buttons the stems *g″* carry down the bars *g*, which are guided partly by the slots *g′* and partly by the levers *d″* until they impinge upon the stems *h‴*. This in turn pushes down the bars *h*, carrying with them the stems *q* and feet *q′*, so that the soft surfaces *q‴* thereof will come into contact with the strings of the instrument and act as stops. As soon as the pressure is removed the return-springs *d‴* and *g‴* will return the parts to their original position, lifting the feet *g′* from off the strings. The stems *h‴* of the bars *h* are so arranged with regard to the bars *g* that when said bars *g* are depressed only such are engaged as will when depressed and carrying their feet onto the strings, make thereby a concordant combination of tones. This is arranged by having stems on those bars which are to be engaged and spaces without stems on those bars not to be engaged, so that by depressing the finger-buttons successively a succession of harmonious musical combinations may be produced, such as are usually played on a guitar. If the lower casing F′ be near one end of the casing E, the feet *q′* will only fall on such notes as comprise the diatonic scale. If this inner casing F′ be slipped toward the other end of the casing E, the feet of *q′* will only fall on such notes as compose the chromatic scale. This shift may be produced by pulling or pushing the handle F‴. The performer may put his finger or thumb into the ring *f* and produce this effect without pausing in the performance of the music, and thus a comparatively unskilled player may be enabled with only a little practice to play the guitar correctly.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an attachment for guitars, the combination with an outer casing, and two inner casings, one higher than, and extending over the other within said outer casing, of two series of sliding bars, the first series within said higher inner casing, working therein, arranged transversely to the neck of the guitar whereon said casings are fastened, and in operative connection with the second series of sliding bars, said second series of sliding bars within the lower one of said inner casings working therein arranged parallel to said guitar-neck, and operatively connected with the strings thereof, means for guiding and operating said bars, and means for holding said casings and their contained mechanism in operative position on the neck of said guitar.

2. In an attachment for guitars, the combination with an outer casing, a removable cover therefor, and two inner casings within said outer casing, and arranged one higher than and extending over the other, of two series of sliding bars, one within said higher inner cover, working therein, arranged transversely to the neck of the guitar whereon said casings are fastened, and in operative connection with the second series of sliding bars, said second series of sliding bars within the lower one of said inner casings, arranged parallel to said guitar-neck, actuated by said upper series of sliding bars, and in operative connection with the strings of said guitar, means for operating said bars, and means for holding said casings and their contained mechanism in operative position on the neck of said guitar.

3. In an attachment for guitars, the combination with an outer casing, a removable cover therefor, and two inner casings one higher than and extending over the other within said outer casing, the higher one of

said inner casings having a plurality of vertical parallel slots in its side walls, the lower one of said inner casings having a plurality of vertical parallel slots in its end walls, of two series of sliding bars, the first series of sliding bars within said higher inner casing, working therein and guided by the slots in its side walls and in operative connection with the second series of sliding bars, said second series of sliding bars within said lower inner casing working therein, guided by the slots in the end walls thereof, actuated by said first series of bars, and in operative connection with the strings of said guitar, means for operating said bars, and means for holding said casings and their contained mechanism in operative position on the neck of said guitar.

4. In an attachment for guitars, the combination with an outer casing, a removable cover therefor, and two inner casings, one higher than and extending above the other, within said outer casing, of two series of sliding bars, the first series of sliding bars within said higher inner casing, working therein, guided by slots in the side walls thereof, arranged parallel to each other and transversely to the neck of the guitar whereon said casings are fastened and in operative connection with the second series of sliding bars, levers pivoted together in pairs by their middle parts, pivoted each by one end to said bars, by the other end to the side walls of said higher inner casing, and in connection with said slots guiding and regulating the motion of said sliding bars; the second series of sliding bars within said lower inner casing working therein, actuated by the sliding bars in said higher inner casing, and in operative connection with the strings of said guitar, means for operating said bars and means for holding said cases and their contained mechanism in operative position on the neck of said guitar.

5. In an attachment for guitars, the combination with an outer casing, a removable cover therefor, and two inner casings, one higher than, and extending over the other within said outer casing, of two series of sliding bars, the first within said higher inner casing, arranged transversely to the neck of the guitar whereon said casings are fastened, and in operative connection with the second series of sliding bars, said second series of sliding bars, within said lower inner casing, arranged parallel to the said guitar-neck, working in said lower inner casing and moving with their ends in slots in the end walls thereof, levers pivoted together in pairs, pivoted each by one end to one end of one of said second series of sliding bars, and by the other to the end walls of said lower inner casing, and together with said end walls slots regulating and guiding the motion of said last-named sliding bars, means for operating said bars, and means for holding the said casings and their contained mechanism in operative position on the neck of said guitar.

6. In an attachment for guitars, the combination with an outer casing, a removable cover therefor, and two inner casings, one higher than and extending over the other, within the said outer casing, of two series of sliding bars, the first series within said higher inner casing, arranged transversely to the neck of the guitar whereon said casings are fastened, working within said higher inner casing, with their ends in slots in the side walls thereof, levers pivoted to each other, the said sliding bars, and the side walls of said higher inner casing, and together with said slots guiding and regulating the motion of said bars, springs attached to said bars and said levers, and by their resilience holding said bars and levers in normal position, the second series of sliding bars within said lower inner casing working therein with their ends in slots in the end walls thereof, levers pivoted together to said last-named sliding bars, and to the end walls of said lower inner casing and together with the said last-named slots guiding and regulating the motion of said last-named sliding bars, springs attached to the levers and bars of the said second series and by their resilience holding them in normal position, and said bars of the second series arranged parallel to each other and parallel to the said guitar-neck, and in operative connection with bars of the said first series and the strings of said guitar, means for operating said mechanism, and means for holding the same in operative position on said guitar-neck.

7. In an attachment for guitars, the combination with an outer casing, a slotted removable cover therefor, and two inner casings one higher than, and extending over the other within said outer casing of two series of sliding bars, the first series within said higher inner casing, each having a stem on the upper edge thereof, which stems reach through the said slots in said cover, and a finger-button on the upper end of each stem, spring-actuated levers pivoted together to said sliding bars, and to the side walls of said upper inner casing, and together with slots in the side walls of said inner casing, guiding and regulating the motion of said bars, the second series of sliding bars within the said lower inner casing in operative connection with the bars of the said first series, and with the strings of the guitar to which the said cases are attached, spring-actuated levers pivoted together to said bars of the second series and to the end walls of the said lower inner casing, and together with slots in the end walls thereof guiding and regulating the motion of the said bars of the said second series, and means for holding the mechanism in operative position on the neck of said guitar.

8. In an attachment for guitars, the combination with an outer casing, a removable slotted cover therefor, and two inner casings, one higher than and extending over the other, within said outer casing, a series of sliding bars within the higher inner casing, having stems extending through said slots in said cover, finger-buttons surmounting said stems, levers within said upper inner casing together with slots in the side walls thereof, guiding and regulating the motion of said bars, and springs actuating said levers, of a second series of sliding bars, within said lower inner casing having operative connection with the strings of the guitar to which the said casings and their contained mechanism are attached, and stems on their upper edges whereby they form an operative connection with the sliding bars of the said first series, levers pivoted within said lower inner casing, and together with slots in the end walls thereof guiding and regulating the motion of the bars of the said second series, springs actuating the last-named levers, and means for holding said casings and their contained mechanism in operative position on the neck of the said guitar.

9. In an attachment for guitars, the combination with an outer casing having slots in the bottom thereof, a slotted removable cover therefor, two inner casings, one higher than and extending over the other, within said outer casing, two series of sliding bars, the first series within the said higher casing arranged transversely to the neck of the guitar to which the said casings and their contained mechanism are attached, having stems on their upper edges which reach upward through the said slots in the said cover, finger-buttons on the upper ends of each of said stems, levers within said inner casing together with slots in the side walls thereof guiding and controlling the motions of said bars, and springs actuating said levers, the second series of sliding bars within said lower inner casing having stems projecting from their upper edges and forming an operative connection with the sliding bars of the said first series, and having each a stem extending from the lower edge thereof, reaching through slots in the bottom of the said lower inner casing, through the said slots in the bottom of the outer casing, and terminating in a foot, and thereby forming an operative connection between said bars of said second series and the strings of said guitar, levers pivoted in said lower inner casing and together with slots in the end walls thereof guiding and regulating the motion of the sliding bars of the said second series, springs actuating said last-named levers, and means for holding said cases and their contained mechanism in operative position on the neck of said guitar.

10. In an attachment for guitars, the combination with an outer casing and a removable cover therefor, two inner casings, one higher than and extending over the other, the higher inner casing being stationary and containing sliding bars arranged transversely to the neck of the guitar to which said casings are attached and having stems reaching without said outer casing and carrying finger-buttons on their outer ends, levers pivoted within said higher inner casing and together with slots in the side walls thereof regulating and guiding the motions of said sliding bars, springs actuating said levers, the said lower inner casing slidably arranged in the said outer casing containing the second series of sliding bars in operative connection with the bars of the said first series, and with the strings of said guitar, levers pivoted therein and together with slots in the end walls of said lower inner casing guiding and regulating the motions of said sliding bars of said second series, and springs actuating said last-named levers, of a handle attached to said lower inner casing, reaching outside of said outer casing and terminating in a ring at its outer end, so that facility is afforded for slipping said lower inner casing in said outer casing and allowing the operative connection with the strings of said guitar to be shifted from the diatonic scale to the chromatic scale, and from the chromatic scale to the diatonic scale as may be required, and means for holding said casings, and their contained mechanism in operative position on the neck of said guitar.

11. In an attachment for guitars, the combination with an outer casing, a cover therefor, and inner casings within said outer casing containing sliding bars, levers and springs as specified, the walls of said outer casing being bent at either end to form vertical grooves, of screws in said grooves, attaching said cases and their contained mechanism to the neck of a guitar, milled nuts on said screws between said outer casing and the neck of said guitar adjusting the distance between the bottom of said outer casing and the strings of said guitar, and milled nuts on the outer end of said screws holding said outer casing and said cover in position, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two witnesses.

SILVESTRI PANELLI.

Witnesses:
J. W. BULMER,
THE. SHIPLEY.