April 22, 1969 E. L. LEE 3,439,570

STRINGED MUSICAL INSTRUMENTS HAVING A SLIDABLY MOUNTED NECK

Filed Oct. 16, 1967 Sheet 1 of 4

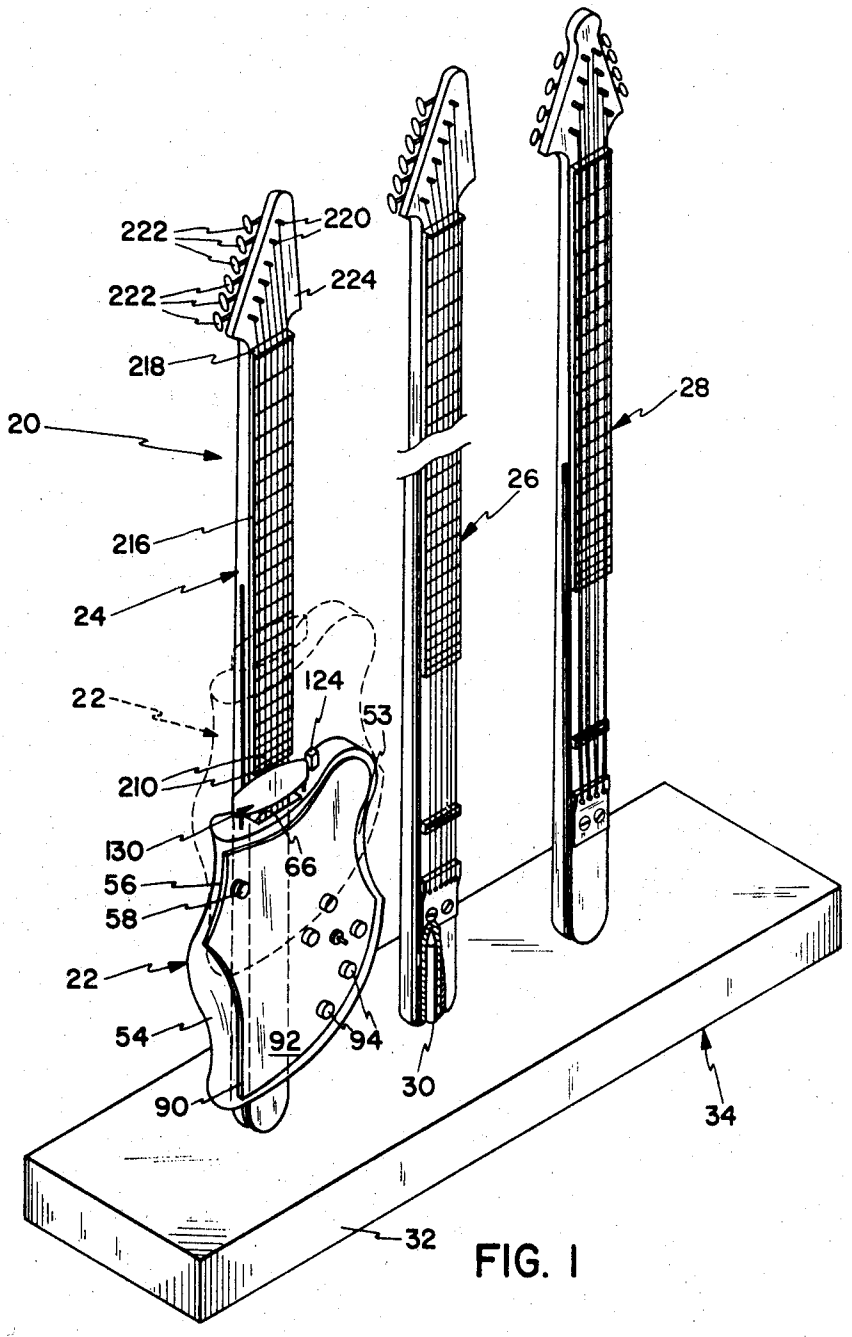


FIG. 1

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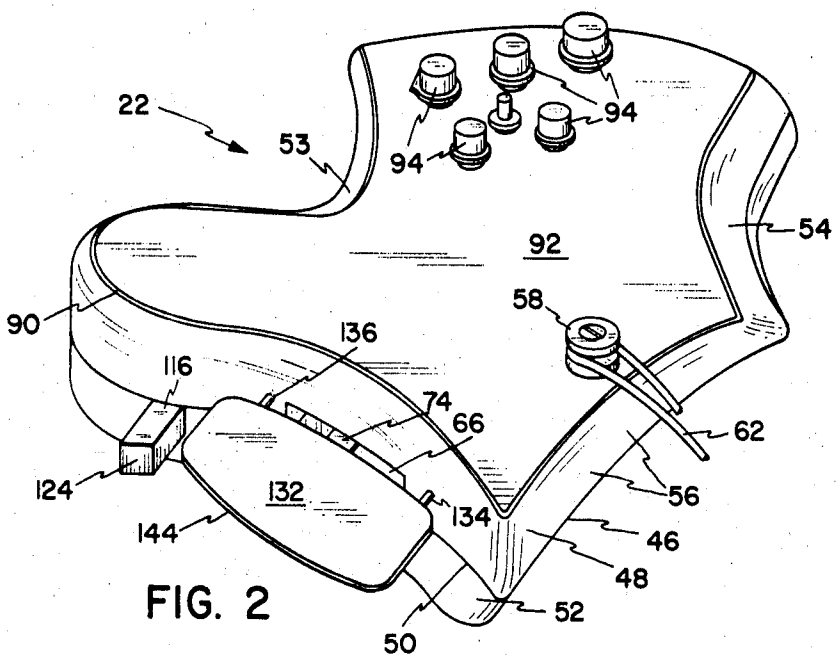


FIG. 2

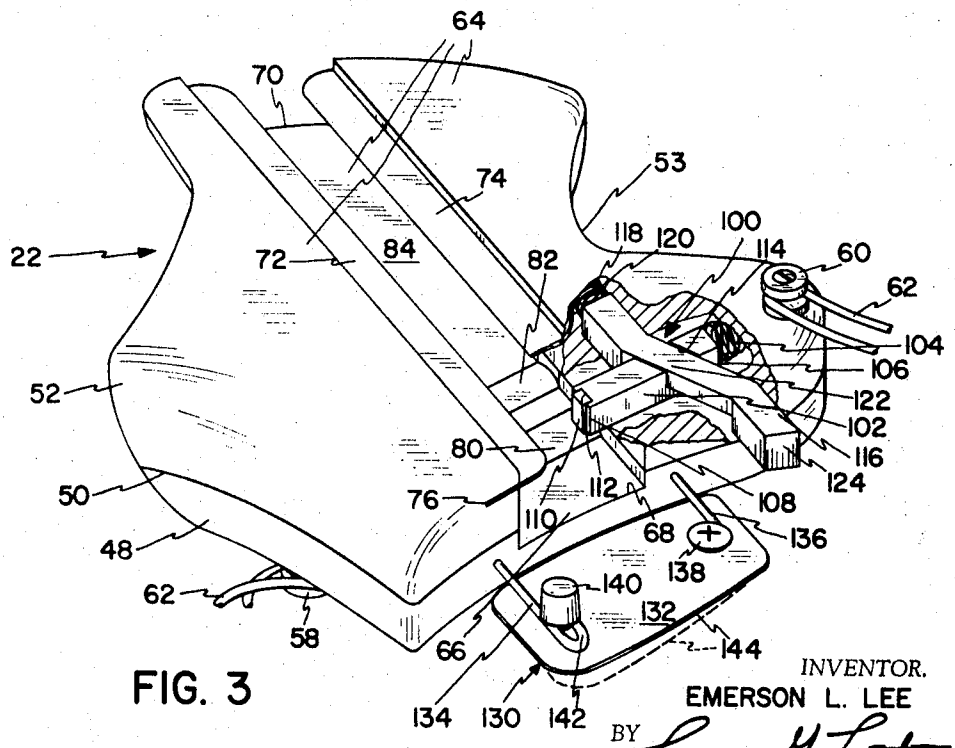


FIG. 3

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STRINGED MUSICAL INSTRUMENTS HAVING A SLIDABLY MOUNTED NECK

Filed Oct. 16, 1967 Sheet 3 of 4

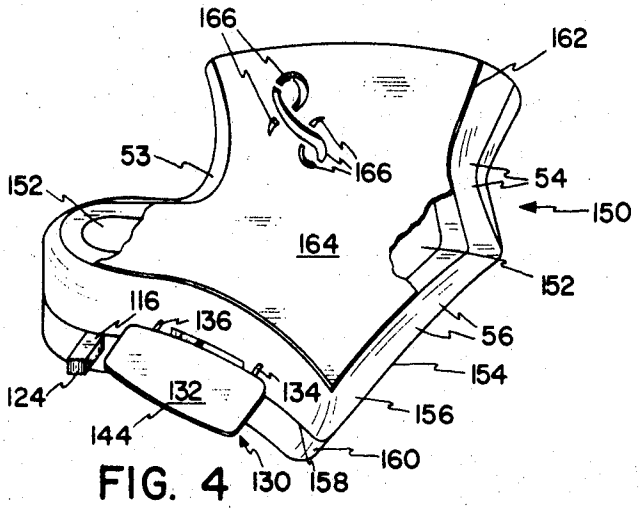


FIG. 4

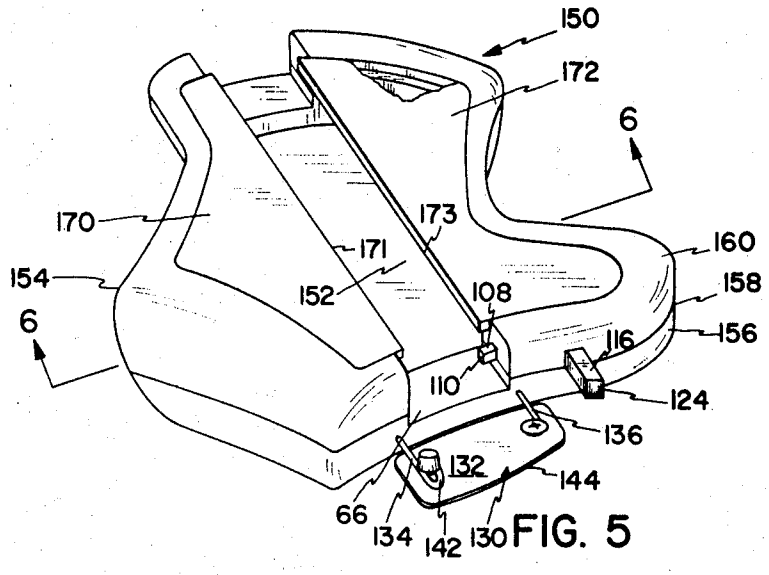


FIG. 5

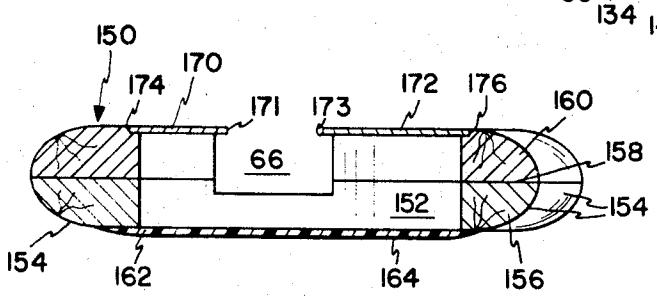


FIG. 6

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April 22, 1969 E. L. LEE 3,439,570

STRINGED MUSICAL INSTRUMENTS HAVING A SLIDABLY MOUNTED NECK

Filed Oct. 16, 1967 Sheet 4 of 4

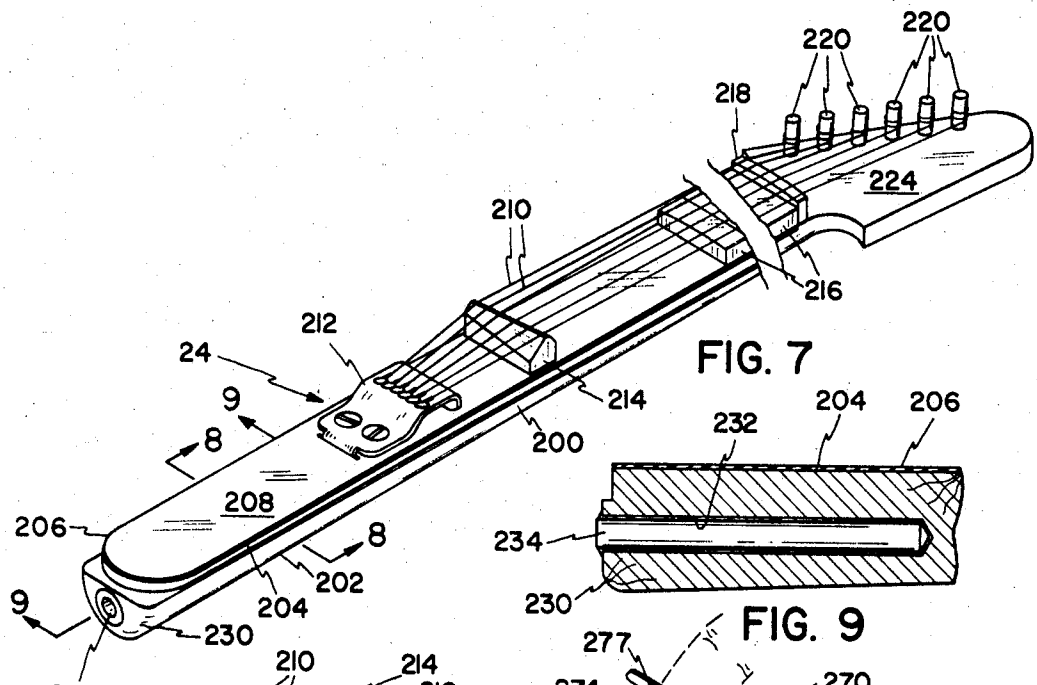


FIG. 7

FIG. 9

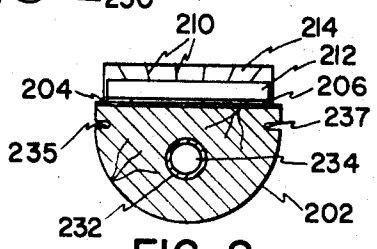


FIG. 8

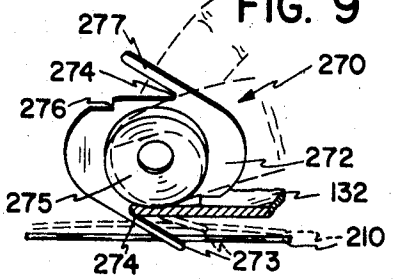


FIG. 10

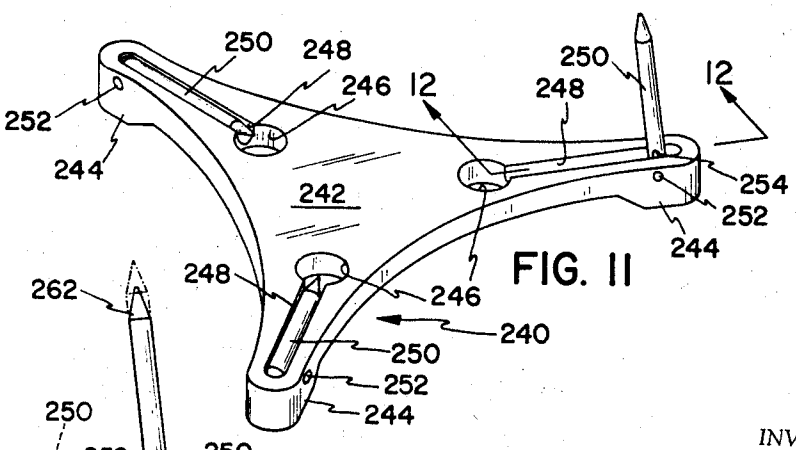


FIG. 11

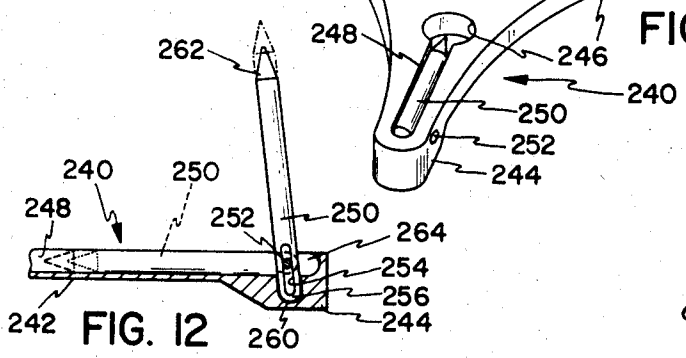


FIG. 12

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United States Patent Office 3,439,570
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3,439,570

STRINGED MUSICAL INSTRUMENTS HAVING A SLIDABLY MOUNTED NECK

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Filed Oct. 16, 1967, Ser. No. 675,530
Int. Cl. G10d 1/08
U.S. Cl. 84—293 13 Claims

ABSTRACT OF THE DISCLOSURE

A musical system, including novel stringed instruments, the presently preferred instrument comprising a body and a neck which can readily be separated one from another to convert the instrument from one to another stringed type by exchanging necks or bodies. When assembled, the neck is slidably coupled to the body so that the body conceals the adjacent part of the strings and the position of the neck relative to the body may be quickly changed by the player when desired both before and during use to make holding, fingering and picking the instrument easier at any point in time. The body novelly accommodates sounding of picked notes from underneath the face of the body so that no interference occurs between the arm of the player used to pick strings and the strings, and the player may comfortably rest the mentioned arm upon the face of the body as the instrument is being played. The disclosure also relates to a novel pick guide mounted on the body, a novel pick and a novel instrument storage assembly.

This invention relates generally to stringed musical instruments, and more particularly to a novel musical system including instruments, wherein the neck may, at the will of the player, be displaced relative to the body from one to any other of a plurality of playing positions to suit the comfort and convenience of the player.

Prior proposed stringed musical instruments have possessed certain limitations. Specifically, such instruments (a) are uncomfortable to hold and inconvenient to play especially for prolonged periods of time during which various portions of the finger board must be used, (b) lack versatility, for example, by reason of having a very limited musical range, (c) are difficult and cumbersome for children to learn to play, (d) are restricted in number and types of musical effects which can be reproduced, (e) result in relatively short string life because strings are always picked in the same region, (f) are awkward to store during periods of non-use, and (g) are costly to manufacture.

Therefore, it is a primary object of the present invention to provide novel stringed musical instruments, which overcome or alleviate at least some if not all of the above-mentioned limitations of the prior art.

In the presently preferred embodiment of the instant invention, a stringed musical instrument is provided which is highly versatile in that the neck is coupled in restrained sliding relation to the body and can, upon release of a brake or like mechanism, be either removed without tools for exchanging either the neck or the body to create a differently sounding stringed instrument or axially shifted and reshifted with respect to the body at any moment desired for the purpose of obtaining and retaining a comfortable playing position regardless of which part of the finger board is to be fingered. In this way, the sliding neck if desired can be made much longer than standard neck lengths whereby the instrument is capable of producing musical notes over a musical range far greater than is possible with stringed instruments of the prior art. Expected string life is longer since the strings are picked in different places at different times.

The face of the body is desirably flat and peripherally contoured, and covers the juxtaposed portion of the strings allowing the player during use to comfortably rest his picking arm directly on the face of the body as the strings are picked adjacent one edge of the periphery of the body. Children with limited reach can adjust the instrument for their convenience during playing, especially when learning, and can situate the neck and body so that the picking and fingering areas are readily visible without craning the neck.

Thus, the vibrating strings are sounded behind the face of the body either within a non-electrically amplified sounding box or by use of an electric pickup unit hidden at or near the underside of the body. This results not only in a significant improvement in holding and playing comfort but also in a meaningful manufacturing cost savings since fancy woodwork or the like is not required at the location where the neck is coupled to the body or in the region where the pickup unit is housed in a hidden position.

A pick guide is supported by the body in superimposed relation over the strings at one end of the body and is provided with a curved edge along which a pick, either of conventional design or of novel construction according to this invention, can be selectively displaced to pick the strings in a very accurately-controlled manner.

Spare necks and the body-mounted neck, when not in use can be individually and collectively stored upon the pegs of a novel floor-engaging instrument storage assembly for convenient and centralized access.

With the foregoing in mind, it is another primary object of this invention to provide a novel stringed musical instrument having one or more of the following advantageous features:

(1) The neck or body of which can readily be exchanged to thereby selectively create different stringed instruments;

(2) The neck of which can be displaced at will relative to the body before and at any time during playing to enable the player to acquire and reacquire positions in which the instrument can be comfortably held and played, and, when set in a selected position, can not be inadvertently shifted from that position;

(3) The body of which is superimposed over the strings (a) so that the picking arm of the player may be freely rested directly upon the face of the body without interference with the strings and (b) to accommodate sounding of vibrated strings within a sounding box or into an electric pick up device from behind the face of the body;

(4) Which has a musical range far in excess of the range of conventional stringed instruments;

(5) Which provides, due to a novel pick guide for more accurate and continuously consistent picking of strings in a less tiring manner;

(6) Which accommodates production of distinct sounds, such as a pleasing "tremolo" effect, through use of a novel pick;

(7) Which can be retained individually or as part of a group of instrument pieces upon a novel instrument storage assembly during periods of non-use;

(8) The body of which is desirably flat for easy viewing of the areas picked and fingered and is peripherally contoured to comfortably accept appropriate portions of the player's body during use;

(9) Which can be suitably constructed at less expense than can prior art stringed instruments;

(10) The strings of which last longer because they are picked in different places at various times;

(11) Which can be used to more satisfactorily teach a novice, especially a child.

These and other objects and features of the present invention will become more fully apparent from the following description and appended claims taken in conjunction with the accompanying drawing wherein:

FIGURE 1 depicts in perspective neck and body components of presently preferred embodiments of this stringed instrument invention mounted in upright relation upon pegs which comprise part of the floor-engaging instrument stand;

FIGURE 2 is an enlarged front perspective of an instrument body, of the type shown in FIGURE 1, adapted to be used together with electrical amplifying equipment;

FIGURE 3 is a rear perspective of the instrument body of FIGURE 2;

FIGURE 4 is a somewhat enlarged front perspective of another instrument body, of the type shown in FIGURE 1, which is a hollow body providing a sounding box for emission of audible musical notes;

FIGURE 5 is a rear perspective of the instrument body of FIGURE 4;

FIGURE 6 is a cross sectional view taken along line **6—6** of FIGURE 5;

FIGURE 7 is an enlarged front perspective of the neck of the instrument shown at the left of FIGURE 1, with a central portion broken away for ease of illustration;

FIGURE 8 is a cross sectional view taken along line **8—8** of FIGURE 7;

FIGURE 9 is a fragmentary cross sectional view taken along line **9—9** of FIGURE 7;

FIGURE 10 is a perspective view of a novel pick for use with stringed instruments;

FIGURE 11 is a perspective of a presently preferred peg-providing instrument storage stand upon which stringed musical instruments and parts thereof, manufactured according to this invention, may be stored during periods of non-use; and

FIGURE 12 is a cross sectional view taken along line **12—12** of FIGURE 11, illustrating the four possible positions which each peg may occupy.

Specific reference is now made to the drawings wherein like numerals are used to designate like parts throughout.

FIGURE 1 illustrates exchangeable parts which may be selectively combined to form various types of stringed musical instruments, for example, the instrument generally designated **20**. The instrument **20** comprises a separable body, generally designated **22**, and a sliding neck, generally designated **24**. The neck **24** can be removed and replaced by other stringed necks, such as the giant neck **26** or the 8-string neck **28**, to versatilely allow for prompt creation of differently stringed musical instruments.

The separable body, such as body **22**, can also be removed and replaced by other suitable bodies, such as the one shown in FIGURES 4–6, inclusive. Thus, non-amplified hollow bodies provided with a sounding box may be used as well as electrically amplified bodies, provided with circuitry and adapted to be electrically connected to an amplifier and speaker assembly for sounding picked notes.

The sliding neck, such as the neck **24**, is mounted upon a suitable body so as to be longitudinally displaceable at the will of the player of the instrument. The neck may be provided with any feasible number of strings, and may comprise a bass guitar, a wide range stringed instrument, a mandolin, a banjo, etc. Instruments of all of the mentioned types or any part of them may be provided in a group and components may be exchanged one for another at the desire of the player without use of tools. In each case, the sliding neck is a musical instrument in itself, while the body performs the function of holding the neck in a selected position. When not in use, each sliding neck may be supported upon a peg, such as peg **30**, for centralized, easy access. Each peg **30** in FIGURE 1 is illustrated as being fixed in an upright disposition to a floor-engaging pedestal **32** comprising part of an overall instrument storage stand **34**.

It is to be appreciated that once a given neck, such as **24**, and a given body, such as **22**, have been slidably united, as shown at the left in FIGURE 1, the neck may be selectively displaced axially substantially along its length relative to the body from any one position to any other position. For example, contrast the solid body position with the dotted body position in FIGURE 1. Thus, a convenient holding and playing position may be initially selected, based on the part of the finger board which the player expects to use. Moreover, at any point in time during playing, the position may be instantly reset by sliding the neck **24** relative to the body **22** to obtain a more comfortable or convenient position in which to jointly finger and pick the strings. Once a given position has been selected, it is retained by a suitable brake or like mechanism until the player elects to alter the position at which time the brake can be easily released.

While only two spare necks, **26** and **28**, are illustrated, it is to be appreciated that any number of differently sounding necks could be provided. The neck **26** is unusually long and is provided with far more frets on the finger board than exist on standard sized necks, to provide an unusually wide-range of musical note-making capability. The extra length poses no difficulty as the neck **26** can be axially adjusted relative to the body upon which it is adapted to be mounted so that the portion of the finger board anticipated to be played will be situated to provide a comfortable left hand position, for example, directly beneath the left shoulder, when the instrument is played in the conventional manner, namely, by fingering with the fingers of the left hand and by picking with the right hand.

Specific reference is now made to FIGURES 2 and 3 which in greater detail illustrate, as typical, the body **22**. The body **22**, as illustrated, comprises a block **46** formed of a top block piece **48** laminated or otherwise bonded at interface **50** to spaced rear block pieces **52**. The block pieces may be formed of hardwood, plastic, fiberglass or other suitably durable and shape-retaining materials sufficient to accept a sliding neck manufactured according to the present invention and retain the neck in a selected position.

The block **46** is, by comparison with standard bodies, very flat and receives the neck so that the back surface of the neck runs tangential to the chest of the player, making it easy for a player to view the strings as they are being played. Moreover, the block **48** is peripherally shaped or contoured to present an attractive appearance and to provide three concave grooves or cavities. These grooves or cavities are a thigh-receiving cavity **53**, adapted to rest upon the thigh of the player with the leg raised in L-shape position to allow for comfortable playing, an arm-receiving cavity **54** adapted to receive the picking arm of the player in comfortable relation, and a chest-receiving cavity **56** adapted to comfortably rest against the chest of the player when suspended by a shoulder strap during use.

Screw-restrained pegs **58** (FIGURE 2) and **60** (FIGURE 3) are provided front and back to receive a shoulder strap **62** for suspending the instrument in a conventional manner during use while standing.

At the back side **64** of the body **22**, a longitudinally-extending, open-sided, rectangular recess or channel **66** extends the full length of the body **22**. The rectangular recess or passage **66** is fully open at both the front, at **68**, and the rear, at **70**, of the body, and is preferably eccentrically disposed toward the cavities **54** and **56** so that the cavity **56** of the instrument, when held against the chest by the player, will rest upon the player's rib cage more or less at the abdomen.

Opposed, flat tongues or keys **72** and **74**, fabricated from suitable plastic, such as nylon, from metal, from fiberglass, or the like, are disposed jointly in a common plane parallel to the plane of the body **22**. Each tongue or runner **72** and **74** is secured in a slit **76** in the body by bonding, screws or in any other satisfactory way. The purpose of the runners or tongues **72** and **74** is to slidably receive a

selected neck to accommodate relative displacement of the neck with regard to the body to select comfortable and convenient holding and playing positions so that the portion of the finger board which the player anticipates fingering with the left hand will be generally downward of the left shoulder rather than lateral of the left shoulder.

As is evident from FIGURE 3, a pair of pick-up heads **80** and **82** are buried or recessed at the base **84** of the longitudinal, rectangular recess or axial cavity **66**. Thus, concealment of the heads **80** and **82** does not require the presentment of fancy and expensive casings or enclosures as is the case when heads are exposed to view on conventional guitars and the like.

The pick-up heads **80** and **82** form part of conventional electrical circuitry of the stringed instrument which need not be described in this specification because of its conventionality. Such circuitry is hidden in one or more cavities (not shown) provided in the body **22** and is concealed beneath the cover plate **90**.

The cover plate **90** may be of bonded thermoset plastic such as "Formica" or the like or suitable wood or metal. Preferably, the cover plate **90** will present an essentially unencumbered exterior decorative face **92**. Electrical controls **94**, also conventional, are provided at face **92** for tone, volume and like selection. An outlet plug (not shown) is suitably disposed in the body **22** so as to be accessible for receiving a jack (not shown) adapted to receive a cord which spans between the instrument and an amplifier-speaker assembly.

The body **22** is also provided with a brake mechanism, generally designated **100**. It is to be appreciated that while only one brake mechanism is illustrated, many types of brake mechanisms could be used to fulfill the purpose to be described.

The brake mechanism **100** is concealed in a suitably configurated cavity within the body **22** and comprises a linear plunger **102** biased toward the longitudianl recess **66** by a compression spring **104** interposed between the body **22** and the concealed end **106** of the plunger **102**. The tip **108** is exposed at the recess **66** and carries a neck-engaging friction brake pad **110** adhesively secured in a notch **112** at the tip **108** to normally develop a pressurized friction engagement with the neck .

An angular, internal side notch **114** accepts a brake actuator **116**. The brake actuator is biased outwardly by a compression spring **118** interposed between the body **22** and the concealed end **120** of the actuator **116**. The central angular portion **122**, upon inward pressing of an exposed push button end **124**, displaces the plunger **116** inwardly from the recess **66** to thereby release the brake shoe pad **110** from contact with the neck to accommodate relative displacement of the neck and the body to slidably change the position of the neck or to remove the neck from the body.

The body **22** also carries an adjustable pick guide, generally designated **130**. The guide comprises a metal or rigid plastic plate **132** mounted in cantilevered relation to the body **22** upon rigid wires **134** and **136** which are respectively satisfactorily embedded in or otherwise supported by the block **48**. The plate **32** is thereby superimposed over the strings on a selected neck to one side of the body when a nack is assembled upon the body **22**. A screw **138** securely fixes the exposed looped end of thc wire **136** to the plate **132** and a cap screw **140** adjustably secures the exposed end **142** of the wire **134** to the plate **132**. Inasmuch as the exposed end **142** of the wire **134** comprises an elongated loop **142**, the position of the plate **132** may be adjusted (contrast the solid and dotted plate positions of FIGURE 3) so that the leading curved edge **144** of the plate **132** can be positioned through such adjustments, for example, to suit the natural arch traversed by the right hand of a given individual while holding the instrument in any one of several possible playing positions and picking the strings on the neck. Picking is accomplished by displacing a pick across the leading edge **144** of the guide in a to and fro manner so that the pick will appropriately strike strings desired in a more exact manner and one which will be less tiring to the individual playing the instrument. At the same time, use of the pick guide **130** accommodates far better control and allows for the precise production of musical effects such as a "tremolo" effect. Thus, the picking area provided by instruments according to the present invention is adjacent one side of the body and the neck-carried strings are disposed in part in hidden relation behind the face of the body and are sounded from underneath the face by the body adjacent pick-up heads **80** and **82**. While not shown, a suitable electric pick-up unit similar to **80** and **82** could be eliminated from the body and directly associated with the neck adjacent the strings in a manner known in the art. In that event, the body would serve only to hold the neck in the selected position.

Specific reference is now made to FIGURES 4 through 6, which depict, as typical, a non-electrically amplified body, generally designated **150**. A resonance chamber or sounding box **152** is housed within the flat body **150** by a contoured, peripheral-edge frame **154** which externally presents essentially the same contoured exterior as does the described body **22** and may be fabricated of the same material, such as hardwood.

The frame **154** is formed of a front block piece **156** laminated or otherwise secured at **158** to back block pieces **160**. The frame **154**, formed by block pieces **156** and **160** is illustrated as being internally configurated in the same manner as it is externally configurated. However, the sounding box **152** which is formed by the mentioned internal configuration could be of any satisfactory shape and size and need not correspond to the external configuration of the body **150**.

The sounding box **152** is further formed by a thin front face or cover plate **162** which desirably provides a substantially unencumbered decorative front face **164** and in appearance resembles the described cover plate **90** of the body **22**. Additionally, the cover plate **162** is provided with sounding holes **166**, which in the illustrated embodiment take the shape of the letter L. See FIGURE 4.

The sounding box **152** is also formed in part by spaced, opposed rear cover plates **170** and **172**. The plates **170** and **172** are disposed in a common plane parallel to the plane of the body **150** and present opposed free edges **171** and **173**. As is evident from FIGURE 6, the rear cover plates **170** and **172** are illustrated as being formed of metal, although other suitable rigid materials could be used. The rear cover plates **170** and **172** are secured in recesses **174** and **176**, respectively, although this is optional, and are adapted to function as guides, optionally referred to as runners, keys, and tongues, to slidably accept and retain a neck fabricated according to the present invention similar to the manner in which the tongues **72** and **74** of body **22** receive and retain the neck according to the present invention.

The body **150** is illustrated as being equipped with the brake mechanism **100** for holding a given neck in a given position. Also, the body **150** is provided with the pick guide **130**, already described. Other structure which is similar to that described in conjunction with the body **22** has been identically numbered in FIGURES 4 through 6 and no further description will be here presented as the previous description is deemed sufficient.

Specific reference is now made to FIGURES 7, 8, and 9 which depict, as typical, one presently preferred neck heretofore mentioned and identified by the general numeral designation **24**. The neck **24**, as illustrated, comprises a solid hardwood main stem **200** which runs essentially the full length of the neck and may be provided with central reinforcement, e.g. a steel bar, if desired, primarily for the purpose of constraining the stem in a linear disposition counter to the eccentric force exerted upon the neck by the tension in the strings. In cross-

section the stem **200** is generally semi-circular, providing a curved under surface **202** (FIGURE 8) and a front flat surface **204**. The front surface **204**, if desired, can be provided with a facing plate **206** comprising a rigid plastic, such as "Formica," which would provide a decorative exposed face **208**.

The neck **24** is provided with an array of strings **210** which may be of any feasible number, six being illustrated in FIGURE 7. The strings **210** are held in side-by-side relationship by a tail piece **212** in a conventional manner. The strings pass over a bridge **214**, across a finger board **216**, maintaining the mentioned spaced relation, and over a nut **218**, all in conventional manner. Conventionally, the ends of the strings **210** are respectively wrapped about tuning pegs **220** which are controlled by tuning keys **22** (FIGURE 1) at the head or distal end **224** of the neck.

As will be readily apparent by reference to FIGURES 8 and 9, the neck **24** is provided at its proximal end **230** with a blind bore recess **232** which receives a blind bore metal insert **234** in press-fit relation.

The purpose of the blind bore insert **234** is to accommodate placement of the neck, with or without an attached body, upon a peg of a stand for storage during non-use. Two such strands are illustrated, namely, the stand **34** of FIGURE 1, already described, and the stand **240** of FIGURES 11 and 12, hereafter described. By placing the necks of different manufacture but all according to the present invention upon separate pegs comprising a closely spaced array, one is able to quickly select a given neck for use with a given body and is able to exchange one neck for another with very little inconvenience and practically no loss of time, for example, when a comparatively lengthy musical concert is being presented using instruments according to the present invention.

The stem **200** is also provided with opposed side grooves or keyways **235** and **237** which are disposed in a common plane and extend longitudinally or axially through most of the length of the neck **24**. In the illustrated embodiment, the grooves **235** and **237** are directly fashioned in the wood of the stem **200** and are shaped and sized to snugly though slidably receive the free opposed edges of the nylon tongues **72** or **74** of the body **22** (or the free edges **171** and **173** of the back cover plates **170** and **172** of the body **150**). In this way the neck can be slidably joined to the body with the tongues **72** and **74** in mating relation with the grooves **235** and **237**. Thus, necks and bodies may be quickly exchanged, the position of the neck relative to the body may be quickly shifted before or reshifted during playing of the instrument to provide a more comfortable and convenient instantaneous playing position. Once a position is selected, the described brake mechanism **100** will restrain the neck in that position until released for changing positions.

More specifically, to install a neck according to the present invention upon a body according to the present invention, the brake mechanism **100** is released by depressing the push button **24**. This retracts the brake pad **110** away from the longitudinal recess **66**. The plane of the grooves **235** and **237** is aligned with the plane of the tongues **72** and **74**, respectively (or with the plane of the back cover plates **170** and **172**). The neck is displaced axially relative to the body maintaining the alignment of planes until the proximal end **230** of the stem **200** is superimposed over the body a substantial distance along the recess **66**.

Thereafter, once the brake mechanism is released, the brake pad **110** will contact the adjacent surface of the stem **200** and restrain the neck in the mentioned position. Before or during playing the neck position may be quickly readjusted so that fingering upon the finger board **216** may take place preferably downward from the left shoulder as picking of the strings takes place adjacent the body below the curved edge **144** of the pick guide **130**.

The strings which are juxtaposed the body are hidden behind the face of the body and sounding of vibrated strings takes place at this location either within a sounding box of the type provided by body **150** or through utilization of a body, such as **22**, which accommodates sounding by electrical amplification. The concealment of the strings is also advantageous as no interference between the arms and clothing of the person playing the instrument and the strings will occur. The player of the instrument will be entitled to conveniently rest his right arm upon the face of the body so as to confortably pick the strings, as desired.

This instrument arrangement is especially advantageous for teaching novice players, especially children, inasmuch as the sliding neck, the flat body and the concealment of the strings allows the child to more comfortably finger and pick the strings within easy reach and at the same time readily visually observe the locations at which fingering and picking are taking place.

While only one neck, identified by the numeral **24**, has been described in detail in this specification, it is to be appreciated that a wide range of similar necks could be provided so that new musical sounds may be effected and essentially any type of conventional stringed musical effect and sound can be produced. Two such necks are illustrated in the FIGURE 1 and identified by the numerals **26** and **28**, neck **26** providing a significantly greater number of spaced frets and a length far greater than a standard neck length so that an extremely wide musical range of notes can be produced.

The manner in which the neck is slidable relative to the body provides an additional advantage, namely, the string life of wound strings is materially increased because the strings will be picked at various locations along the length of the strings corresponding to the selected positions of the neck relative to the body.

Specific reference is now made to FIGURE 10 which in perspective illustrates a novel pick for use with stringed instruments. The pick is generally designated **270** and is configurated to provide a relatively thin or flat gripping portion **272** equipped with an integral concave, thumb-engaging button **275** and opposed flexible narrow pick fingers **273** and **277**, of different size and flexibility. Either finger **273** or **277** may be selected for use, the thinner finger **273** being preferred for playing melody and the heavier finger **277** being preferred for chording. In either case, the selected finger will bend noticeably as a string is picked by the selected finger. Contrast the solid with the dotted finger **273** positions of FIGURE 10. The pick **270** is preferably fabricated of a resilient though durable material, such as nylon, and is provided preferably with at least one notch **274** adjacent each finger **273** and **277**. A second notch **276** can optionally be provided. One selected notch **274** or **276** can be placed over the front curved edge **144** of the described pick guide **130** and displaced to and fro as desired to cause the flexible finger **273** or **277** to pick across one or more strings **210**. A somewhat different musical effect is produced by such picking technique depending upon which notch and which finger are selected for such displacement to and fro across the edge **144**. The pick **270** is also particularly advantageous in producing a unique "tremolo" musical effect caused by rapidly displacing the finger **273** or **277** back and forth across a given string mounted upon the neck.

The mentioned instrument storage stand **240** of FIGURES 11 and 12 comprises a floor-engaging base **242** fabricated of metal and providing three pedestals **244** and equi-radial eccentric holes **246**. The base **242** is basically triangular in shape and is fabricated to present a curved open groove **248** aligned radially outward from the center of the base **242** and opening at the inside end thereof into each hole **246**. The outside end of each groove **248** receives a peg **250** in pin-connected, hinged relation. The pin **252** is secured in tight-fitting relation in

apertures, aligned normal to the radial direction of the groove **248**, provided in the base **242** and the pin **252** extends through a closed slot **254** provided in the one end **256** of the peg **250**. See FIGURE 12.

Each pedestal **244** of the base **242** is provided with an essentially upwardly opening, slightly inwardly angled blind bore **260**. This accommodates placement of the peg in a locked, upstanding direction with the proximal end **256** being received in mating relation in the similarly-shaped blind bore **260** so as to lock the peg in the erect sold position illustrated in FIGURE 12. It is in this position that a neck according to the present invention at insert **234** may be fitted upon the peg **250**, the distal end of which is tapered at **262**.

Each peg **250** may assume three other positions, i.e. (a) the upright dash-dot position of FIGURE 12 wherein the peg is elevated sufficient to remove the proximal end **256** from the blind bore **260**, (b) the dash position of FIGURE 12 with the peg **250** pivoted to the horizontal so as to be received in the adjacent open groove **248**, and (c) the dot position of FIGURE 12 which is radially outward from the dash position of FIGURE 12 such that the proximal end **256** is situated in contact with end **264** within the open groove **248**. The latter position prohibits pivotal movement of the peg **250** relative to the base **242** about the pin **252**. Thus, the latter position locks the peg **250** in an inactive position. The dash position mentioned must be reassumed before the peg **250** can be pivoted to the erect positions.

The advantage of disposing the pegs **250** at an angle toward the center of the base **242** when erect is to cause the center of gravity of any neck or neck-body combination which may be secured upon the peg to be placed closer to the center of gravity of the base so as to avert tipping over the base.

From the foregoing it is apparent that the present invention provides unique body and neck components which may be selectively slidably joined to provide various and almost unlimited types of versatile stringed musical instruments and, once joined, can be relatively axially shifted and reshifted with little loss of time to obtain the most comfortable holding and playing position for the moment. A novel pick, pick-guide and instrument storage assembly are provided and the mode of playing such instruments is distinctive.

What is claimed and desired to be secured by United States Letters Patent is:

1. In a stringed musical instrument, an instrument body comprising an essentially unencumbered front face and a longitudinally-extending neck-receiving passage disposed in the body behind the front face and terminating fore and aft respectively in a first opening at the front end of the body and a second opening in the back end of the body, the body being mounted to an instrument neck within the passage behind the face in selectively slideable relation, said neck having a series of side-by-side strings and adapted to project fore and aft through both the first and second openings beyond the body, the portion of the strings coextensive with the body being concealed behind the face, said slideable mount comprising guide means exposed within the passage to selectively accommodate (a) rapid relocation of the neck relative to the body from any one position to any other desired playing position so that the length of the neck extending from the first opening beyond the body is thereby varied, and (b) total separation of the neck and the body for exchange of either the body or the neck to convert the instrument from one type of stringed instrument to another and brake means interposed between the body and the neck at the passage for holding the neck in any selected playing position and accommodating said relocation.

2. In a stringed instrument comprising a neck with a plurality of frets disposed along one surface of an elongated stem portion of the neck presenting adjacent the one surface over the frets an array of strings to be manipulated by a player, a body having an axial through-channel opening at both ends of the body, the through-channel receiving the stem through one of the openings and allowing for projection of the tail of the neck through the other opening, the body comprising structure adjacent the channel to accommodate sounding of audible notes in response to manipulation of the strings, coupling means integral with the body slideably engaging mating coupling means exteriorly exposed at the stem of the neck such that the player can incrementally axially displace the neck relative to the body within the through-channel from one to any other desired position to make the instrument easier and more comfortable to use and hold and brake means accommodating said axial displacement during repositioning and restraining the neck in any selected position.

3. In a stringed instrument as defined in claim **2** wherein the brake means comprises a normally closed manually-actuated brake mechanism interposed between the neck and the body and adapted, at the election of the player, to (a) develop a pressurized friction engagement between the neck and body for restraining the neck in any selected position relative to the body and (b) readily open to accommodate free, unrestrained axial displacement of the neck relative to the body.

4. In a stringed instrument as defined in claim **3** wherein the brake mechanism is housed in the body and comprises (a) a biased plunger presenting an exposed friction brake shoe for normally engaging the surface of the neck and thereby restraining the neck as mentioned, and (b) release means which when actuated retract the friction brake shoe away from the neck into the open position for achieving the mentioned axial displacement.

5. In a stringed instrument as defined in claim **2** wherein said coupling means comprises axially extending interrelated guide means disposed within the channel and interposed between the neck and the body to accommodate the mentioned relative axial displacement from position to position without relative rotational and lateral displacement between the neck and the body.

6. In a stringed instrument as defined in claim **5** wherein said guide means comprises (a) longitudinally-extending keyway means carried by one of the body and and the neck and (b) longitudinally-extending key means which mate with the keyway means carried by the other of the body and the neck at a location generally within the longitudinally-disposed channel.

7. In a stringed instrument as defined in claim **2** wherein said neck has an overall end-to-end length which exceeds the standard neck length by a significant amount providing a wide musical range such that normally a player cannot comfortably finger the strings near the distal end of the finger board and jointly pick the strings near the tail piece of the neck, said neck presenting on the one surface thereof a series of frets one spaced from another whereby a wide range of musical notes which exceeds the range capability of fixed neck instruments may be sounded by displacing the neck through the channel relative to the body until the portion of the finger board to immediately thereafter be played is disposed in close proximity to the body and by subsequently picking and fingering the strings at juxtaposed locations within easy reach and sight of the player.

8. In a stringed instrument, a neck strung with an array of side-by-side strings and a body to sound musical notes responsive to picking of strings, said body being provided with a reduced depth portion comprising a longitudinal generally U-shaped recess with openings at fore and aft ends of the body and along the underside and further comprising structure including brake means disposed within the recess for connecting the body to the neck so that the body generally conceals the juxtaposed portion of the strings while allowing the neck to extend through the fore and aft openings whereby a player is able to com-

fortably rest the arm used to pick the strings upon the face of the body without interference with the strings as the instrument is played.

9. In a stringed instrument as defined in claim **8** wherein said body comprises a hollow sounding box in open communication with the longitudinal U-shaped recess having string ingress means so that the strings extend into and vibrate within the box as the instrument is played.

10. In a stringed instrument as defined in claim **8**, wherein said body is generally solid and carries sounding means operated by electrical energy including pickup means carried by the body at the underside thereof at the U-shaped recess directly adjacent the concealed portion of the springs, and circuitry means adapted to operate speaker means.

11. In a stringed instrument as defined in claim **8** wherein said structure for connecting the neck and the body comprises means associated respectively with the external periphery of the neck and the body to accommodate relative axial displacement therebetween for extending and retracting the neck relative to the body when desired by the player.

12. A multi-position stringed musical instrument comprising a body and a neck, the body comprising (a) an unencumbered front face, (b) an axial cavity behind the front face of the body extending the full axial length of the body commencing at a neck-ingress opening disposed generally transverse to said axis and ending at a neck-egress opening disposed generally transverse to said axis, (c) sounding means adjacent the cavity and (d) axially-oriented anti-rotate neck-uniting means exposed at the cavity, the neck comprising (e) a slender stem projecting out of the neck-ingress opening and terminating in (f) a

head, (g) a tail piece adapted to project out of the neck-egress means beyond the body, (h) an array of strings superimposed over (i) spaced frets and concealed in part behind the face of the body in the cavity and (j) axially-oriented anti-rotate body-uniting means axially slidably related with the neck-uniting means at the cavity so that the respective relative lengths of the neck exposed beyond the neck-ingress and the neck-egress openings may be varied by axial linear translation of the neck relative to the body at the election of the user so that the portion of the strings to thereafter be fingered and picked can both be closely juxtaposed the body and (k) brake means for restraining the neck relative to the body but accommodating said axial linear translation.

13. In an instrument as defined in claim **12** further comprising a pick guide superimposed over the strings adjacent the neck-ingress opening and having a free edge adapted to guide a pick across the strings.

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