Sept. 1, 1942. W. L. FULLER 2,294,861

ELECTRICAL PICKUP FOR STRINGED MUSICAL INSTRUMENTS

Filed Aug. 14, 1940

Fig. 1

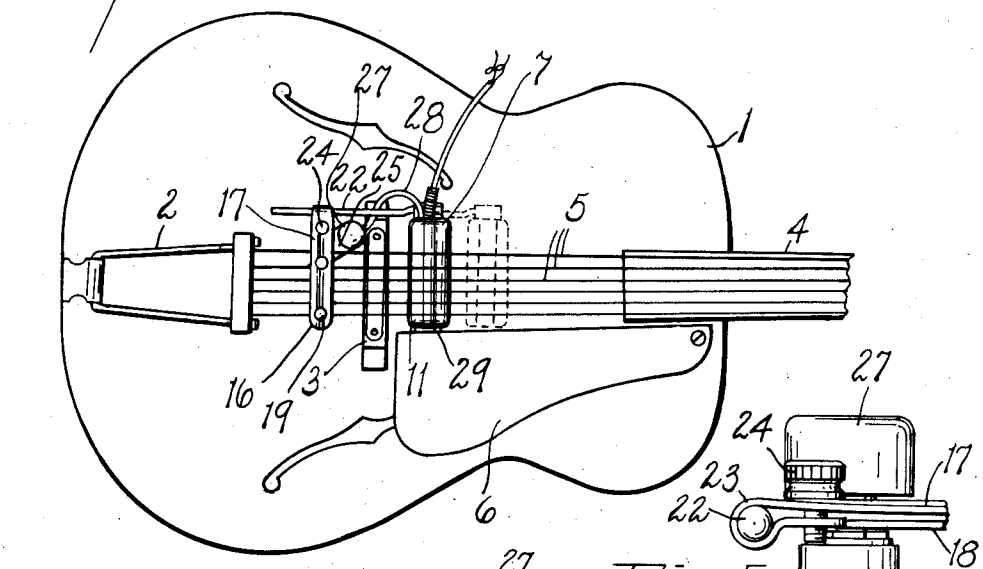


Fig. 2

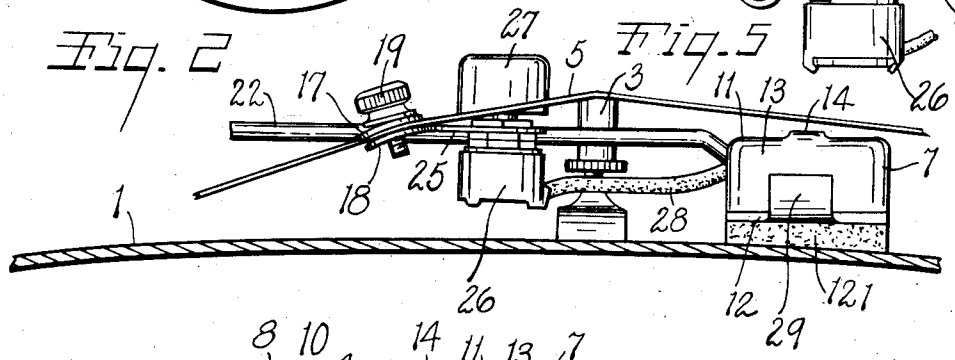
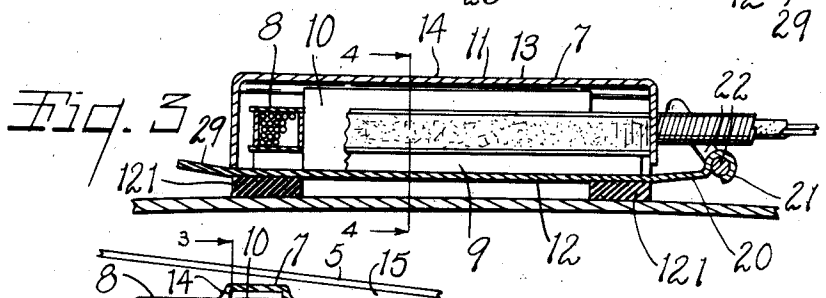


Fig. 5

Fig. 3



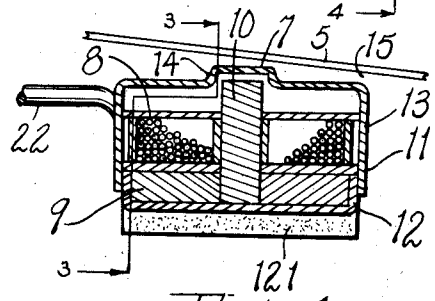


Fig. 4

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ELECTRICAL PICKUP FOR STRINGED MUSICAL INSTRUMENTS

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7 Claims. (Cl. 84—1.16)

This invention relates to improvements in electrical pickups for stringed musical instruments.

The main objects of my invention are:

First, to provide an improved electrical pickup for stringed instruments having provision for readily and quickly mounting the same on and removing the same from the instrument for selective adaptation of the same for electrical reproduction.

Second, to provide a pickup device of the type described, which is characterized by the simplicity and compactness of its parts.

Third, to provide a pickup which is selectively adjustable to various positions relative to the strings or bridge of the instrument to enable the tones reproduced to be varied as desired.

Further objects relating to details and economies of my invention will appear from the description to follow. The invention is defined in the claims.

A structure which embodies the invention is illustrated in the accompanying drawing, wherein:

Fig. 1 is a fragmentary view illustrating a stringed guitar type instrument with the pickup of my invention operatively associated therewith.

Fig. 2 is a fragmentary enlarged view partially in vertical section illustrating the pickup of my invention in operative relation to the strings of the instrument and novel means whereby the pickup is removably mounted on the same.

Fig. 3 is a fragmentary view partially broken away and in section on line 3—3 of Fig. 4, further illustrating details of the pickup construction.

Fig. 4 is a fragmentary view in section on line 4—4 of Fig. 3.

Fig. 5 is a fragmentary side elevational view illustrating in further detail the construction of the pickup mounting.

Referring to the drawing, the reference numeral 1 indicates a guitar type stringed musical instrument well adapted to have associated therewith the improved pickup in accordance with this invention, although it will be apparent from the description to follow that the device is not limited in its application and may be used with any suitable stringed or other instrument having a plurality of vibrators. The instrument described herein includes a tailpiece 2, a bridge 3, and a fret bar 4 with which are associated a plurality of strings 5 in entirely conventional manner. The reference numeral 6 indicates a shield such as is ordinarily associated with instruments of this type.

The reference numeral 7 in general indicates the pickup of my invention which, as illustrated in Figs. 2, 3, and 4, comprises a coil 8 fixedly associated with a permanent magnet 9 and surrounding a vertically extending pole or plurality of pole pieces 10, see Fig. 4. There may be one pole extending across all of the strings 5 or a pole provided with individual pole pieces one for each string, the present invention not being particularly concerned with details of the pickup construction in this respect.

A two-part casing 11 houses the electromagnetic structure of the pickup, this casing comprising a bottom half 12 having pads 121 associated therewith whereby the casing may be removably mounted on the instrument without marring the finish thereof. An upper casing half 13 telescopingly engages the lower half and is provided with an upwardly offset portion 14 providing an internal recess accommodating the vertically extending pole or pole pieces 10. This enables the pole piece to be brought closer to the strings 5, while at the same time providing ample clearance, for example, at 15, to enable the strings to be vibrated without striking or interfering with the casing 11.

The electromagnet casing is mounted on the instrument in a novel manner to enable the same to be readily removed therefrom when desired or adjusted with relation to the strings and bridge to control the playing characteristics. This mounting means is illustrated in Figs. 1 and 2 and comprises a clamp 16 made up of a pair of upper and lower sheet metal string engaging elements 17, 18 respectively, disposed on opposite sides of the strings 5 in the space between the bridge 3 and tailpiece 2 and clampingly engaging the opposite sides thereof. The knurled clamp screws 19 threadedly engage these clamping members to bring the same together and fixedly secure the same relative to the strings and to the instrument body.

Casing 11 has secured thereto, as by integral connection to the lowermost casing half 12, a laterally extending wing 20 terminating in a rounded portion or eye 21 to which is rigidly connected the rearwardly extending adjusting and mounting rod 22 for the pickup. This connection may be effected by welding, offsetting or other process. The string engaging clamp 16 is provided at one side thereof with an adjustable bight 23 slidably receiving the free end of rod 22 (see Fig. 5) and a thumb screw 24 coacts with this bight to enable the clamp rod 22 to be clamped in any desired adjustment of the

rod and pickup casing relative to the strings. Thus, by loosening screw **24**, the pickup may be adjusted from the solid line position of Fig. 1 to the dotted line position and vice versa, thereby governing to a considerable extent the tonal qualities of the notes electrically reproduced. If it is desired to dispense with electrical reproduction, the pickup is quickly and easily removed in its entirety by merely releasing screws **19** and removing the clamp from the strings.

In line with the foregoing purposes, I provide one of the clamping members **17**, **18**, and preferably the latter, as illustrated in Fig. 2, with an integral projecting arm **25** upon which the volume or tone control **26** is mounted, the same having a knob **27** for manual actuation. This control is connected to the pickup coil by a connector **28**.

In order to enable the pickup to be firmly mounted without vibration on the instrument body panel, the casing **11** is provided with a lateral spring finger **29** on the opposite side thereof from the rod supporting wing **20**, as illustrated in Fig. 3, which finger resiliently engages beneath the shield **6** in the manner illustrated in Fig. 1 to prevent any tendency of the structure to vibrate.

By the foregoing, an instrument is provided which is quickly and easily set up for electrical reproduction or not, as desired. The structure is entirely unitary and is compact and simple in its parts. A simple manipulation of the rod clamp screw **24** enables the position of the pickup longitudinally of the strings to be adjusted at will. Of course, the extent to which this adjustment is possible will be limited to the point at which the pickup casing engages strings **5**; however, as clearly illustrated in Fig. 4, the forming of the casing with the upward offset **14** providing the clearance space **15** adds substantially to the space through which the same may be adjusted.

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

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A pickup construction for a stringed musical instrument which is adjustable on and removable from the instrument, comprising a pickup having a vertically extending pole piece adapted to be disposed adjacent and beneath the strings, a casing including a top casing member housing the pickup and having an offset portion extending above the remainder of the casing member and accommodating the pole piece whereby to provide clearance between the strings and said remaining portion, a guide rod secured to one side of the casing and extending rearwardly toward the tailpiece of the instrument, and a clamp slidably receiving and adjustably clamping said guide rod, said clamp having means for fixedly securing the same to the strings between the bridge and tailpiece of the instrument, said clamp having control means for the pickup mounted thereon and being removable from the strings whereby the pickup construction may be removed in its entirety from the instrument.

2. A pickup construction for a stringed musical instrument which is adjustable on and removable from the instrument, comprising a pickup adapted to be disposed adjacent the strings, a casing housing the pickup, a guide rod secured to the casing and extending rearwardly toward the tailpiece of the instrument, and a clamp slidably receiving and adjustably clamping said guide rod, said clamp having means for fixedly securing the same to the strings between the bridge and tailpiece of the instrument and being removable from the strings whereby the pickup construction may be removed in its entirety from the instrument.

3. A pickup construction for a stringed musical instrument which is adjustable on and removable from the instrument, comprising a pickup having a vertically extending pole piece adapted to be disposed adjacent and beneath the strings of the instrument, a casing for the pickup having a portion offset vertically above the remaining portion of the casing and defining an internal recess accommodating said pole piece whereby to provide clearance externally of the casing between the strings and said remaining portion, a mounting element on said casing and extending rearwardly toward the tailpiece of the instrument, and a clamp removably engageable with the instrument strings between the bridge and tailpiece of the instrument and adjustably receiving and clamping said element whereby the position of the pickup relative to the bridge and strings may be varied and the pickup construction removed in its entirety from the instrument if desired.

4. A pickup construction for a stringed musical instrument which is adjustable on and removable from the instrument, comprising a pickup having a vertically extending pole piece adapted to be disposed adjacent and beneath the strings of the instrument, a casing for the pickup having a portion offset vertically above the remaining portion of the casing and defining an internal recess accommodating said pole piece whereby to provide clearance externally of the casing between the strings and said remaining portion, and means for adjustably securing said casing on the instrument.

5. A pickup construction for a stringed musical instrument having a bridge and tailpiece, comprising a clamp adapted to be removably associated with the instrument and having means for fixedly securing the same to the strings thereof between the bridge and tailpiece of the instrument, and a pickup adapted to be disposed on the instrument body beneath the strings thereof and on the side of the bridge opposite from said clamp, said pickup having a guide rod secured thereto and extending longitudinally of the strings, said clamp having means coacting with said rod to secure the pickup relative to the clamp in various adjusted positions thereof longitudinally of the strings, said clamp having mounted thereon a control electrically connected with the pickup.

6. A pickup construction for a stringed musical instrument, comprising a clamp adapted to be removably associated with the instrument including means for fixedly securing the same to the instrument, a pickup mounted on and carried by said clamp adapted to be disposed on the instrument adjacent the strings, and coacting means on said clamp and pickup to secure the pickup to the clamp in various adjusted positions of the pickup relative to the clamp and longitudinally of the strings, said clamp having mount-

ed thereon a control electrically connected with the pickup.

7. A pickup construction for a musical instrument having a plurality of vibrators, comprising a mounting member having means for fixedly but removably securing the same to the instrument, a pickup mounted on and carried by said member adapted to be disposed adjacent the vibrators to constitute the same parts of a unit, and means directly securing said pickup to said member, said mounting member having secured thereto a control for the pickup electrically connected with the latter.

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