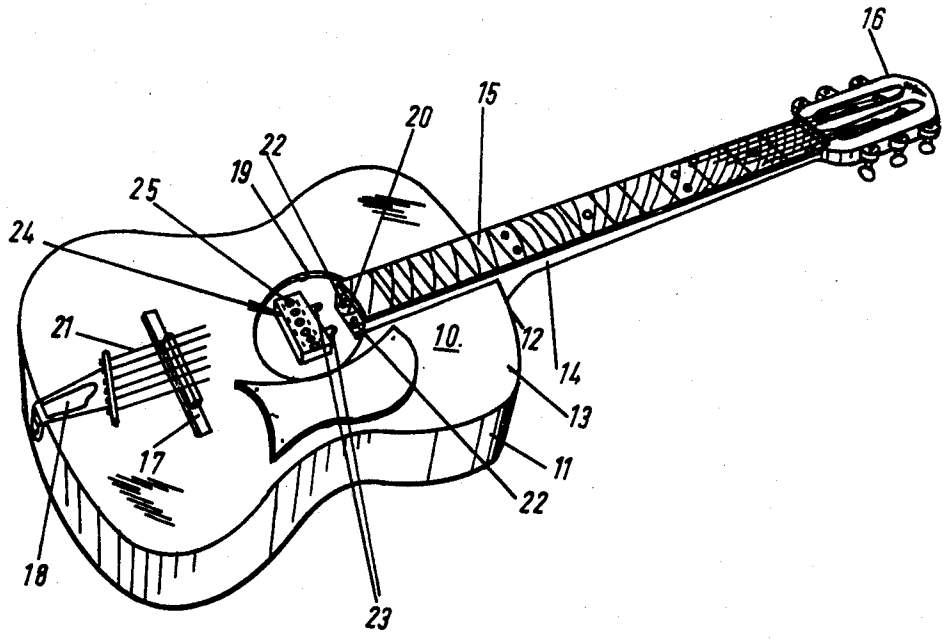
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DETACHABLE PICKUP UNIT FOR USE IN ELECTRONIC STRINGED MUSICAL INSTRUMENTS

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DETACHABLE PICKUP UNIT FOR USE IN ELECTRONIC STRINGED MUSICAL INSTRUMENTS

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ABSTRACT OF THE DISCLOSURE

A detachable pick-up unit for use in a stringed musical instrument such as a guitar having a hollow body and a neck, the pick-up unit having two or more electrical plug connections adapted for insertion in two or more electrical connecting sockets disposed in the end of the neck and facing a cut-out in the hollow body, the pick-up unit when plugged in being located inside the cut-out in the hollow body. Trailing leads are connected with the electrical connecting sockets either directly or through a socket connection mounted elsewhere on the neck or body of the guitar. The pick-up unit incorporates one or more permanent magnets and a series of pole pieces to derive electrical signals from the vibrations of the strings.

The present invention relates to stringed musical instruments and is more particularly concerned with acoustic guitars.

It is conventional to provide an acoustic guitar with a hollow body or belly, a neck bearing a fingerboard, and a machine head extends in the region of the front thereof which carries in its lower half a string anchorage and bridge unit and is provided with an opening beneath the strings and between the bridge unit and the end of the fingerboard. The hollow body and the opening in the front thereof contribute to the tonal characteristics of the instrument. Whilst, for many purposes, the audible sounds produced by the instrument when it is played are sufficient, on occasions it is desirable to derive electric signals from the vibraitons of the strings when the instrument is played. It is an object of the present invention to provide for such a pickup.

According to the present invention, the end of the neck of an acoustic guitar facing the cut-out in the hollow body or belly of the guitar is provided with two or more electrical connecting sockets adapted to receive electrical plug connections forming part of a plug-in pickup unit.

Preferably the plug connections of the pickup unit are a good fit in the sockets so that the pickup can be adequately retained by the plug and sockets so that no other fixing means are required. When the pickup unit is plugged in it will be located inside the cut-out or opening in the front of the hollow body or belly. The sockets in the end of the neck may be connected electrically either to a trailing lead or to a further socket connection into which a suitable trailing lead connection can be inserted for extending the signals derived from the pickup unit to any suitable sound reproducing or recording system such as an amplifier and loudspeaker system or a tape recorder.

Electromagnetic pickups of differing electrical characteristics may be made available and can be readily interchanged at the will of the player.

The invention will be further described with reference to the accompanying drawing which is a perspective view of an acoustic guitar embodying the present invention.

An acoustic guitar **10** comprises a hollow body **11** to the upper end **12** of which there extends from the front **13** thereof a neck **14** having a fingerboard **15** and a machine head **16**. The front of the body carries a bridge unit **17** and the body is provided with string anchorage means such as **18**. The lower end of the fingerboard extends over the front of the body and terminates in the region of a cut-out or opening **19** in the front of the body between the bridge and the lower end **20** of the neck. A plurality of strings **21** extends from the anchorage **18** over the bridge **17**, the cut-out opening **19** and fingerboard **15** to the machine head **16**.

The lower end **20** of the neck which faces or as in the embodiment illustrated, extends into the cut-out **19**, is provided with a pair of electrical socket connections **22** to receive plug connections **23** of a pick-up unit **24**. Purely for the purpose of illustration, the pickup unit **24** is shown spaced from and adjacent the end **20** of the neck, though it will be understood that when required for use, the plug connections **23** would be fully inserted in the socket connections **22** and that the pickup **24** would be adjacent the end **20** of the neck. The plug connections **23** are of sufficiently good fit in the socket connections **22** as to provide sufficient retention for the pick-up unit **24**. The electrical connections are made to the socket connections **22** to connect with a trailing lead which may either be connected directly to the socket connections or through the intermediary of a suitably located socket connection mounted on the neck or on the body of the guitar. The plug connections **23** make electrical connection with one or more coils in the pickup unit **24** which also incorporates one or more permanent magnets and a series of pole pieces such as **25**, whereby electric signals may be derived from the vibrations of the strings **21** which are of magnetic material and may be steel or steel-coated with plastic.

The present invention enables a pickup unit to be attached as and when required and to be removed when not required and does not require a pickup unit to be mounted on the front of the body.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. An acoustic guitar having a hollow body and a neck in which the end of the neck facing a cut-out in the hollow body is provided with two or more electrical connecting sockets adapted to receive electrical plug connections forming part of a plug-in pickup unit.

2. A stringed musical instrument having a hollow body and a neck comprising a hollow body or belly and a neck in which the end of the neck facing a cut-out in the hollow body is provided with two or more electrical connecting sockets in which are received electrical plug connections of a plug-in pickup unit for both supporting the pickup unit and making electrical connection therewith.

3. A pickup unit for use in a hollow body stringed musical instrument such as an acoustic guitar, provided with two or more electrical plug connections adapted to be inserted in two or more electrical connecting sockets disposed in the end of the neck of a stringed musical in-

strument and facing a cut-out in the hollow body thereof for both supporting the pickup unit and making electrical connection therewith.

4. A stringed musical instrument as claimed in claim 1 or 2 in which the plug connections of the pickup unit are a good fit in the sockets whereby the pickup unit can be adequately retained by the plugs and sockets.

5. A stringed musical instrument as claimed in claim 4 in which the pickup unit, when plugged in, is located inside the cut-out in the front of the hollow body.

6. A stringed musical instrument as claimed in claim 5 in which the lower end of a fingerboard on the neck extends over the front of the body and terminates in the region of the cut-out or opening in the hollow body.

7. A stringed musical instrument as claimed in claim

6 in which the lower end of the fingerboard terminates within the cut-out or opening.

References Cited

UNITED STATES PATENTS

3,296,916	1/1967	Palmer	84—1.16
1,689,136	10/1928	Hastings	84—1.16

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