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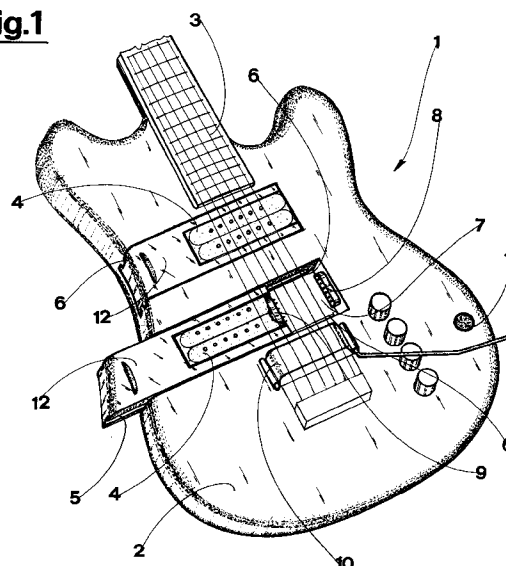
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(54) **An electrical stringed musical instrument.**

(57) A body (2) of a stringed musical instrument (1) is provided with guides (6) perpendicular to strings (3) of the instrument, on which guides (6) a slide (5) can move between a first position, wherein the slide (5) is fully inserted into the body (2) and a second position, wherein the slide (5) is fully extracted from the body (2). A plug (9) of a multicore connector is mounted on the slide (5) and is electrically connected to a pick-up (4), also mounted on the slide (5). The plug (9) inserts into a multicore socket (8) mounted on the body (2) and connected to a jack socket (11).

**Fig.1**



The invention relates to an electrical stringed musical instrument.

In electrical stringed instruments, especially guitars and bass guitars, the use of pick-ups is well known; they are usually mounted on the body of the instrument at a predetermined position with respect to the strings mounted on the instrument.

One of the drawbacks of such instruments is that each single model is different from the next, having its own peculiar timbre, mostly due to the shape of the instrument itself, but also related to the type of pick-up mounted and the type of electrical sound processing circuit for the signal picked up by the pick up. In other words, to obtain a sound having a particular characteristic (metallic, sweet, mellow and so on) the player may have to change instruments.

Musicians, however, tend to have preferences for single instruments, which have been chosen because of their suitability to hand size, stature and so on. So it happens that some of the more well-known musicians have to commission several "made-to-measure" instruments in order to achieve the full range of musical effects they desire.

The main aim of the present invention is to obviate the abovementioned drawbacks and limits in the prior art, by providing an electric stringed instrument which is constructionally simple and which can be used by a musician to obtain various types of sound without having to change instrument or perform complex and time-consuming operations on the processing circuits elaborating the electric signal provided by the pick ups.

An advantage of the invention is that the musician does not have to change instrument in order to modify timbre; so that he or she can carry on using a favourite and well-suited instrument.

A further advantage is that various pick-ups can rapidly be tried out on a same instrument, so that differences between pick-up response and performance can be tested accurately in an identical context.

This aim and others besides are all attained by the device of the invention, as it is characterized in the following claims, which comprises at least one guide, to which a slide is coupled, said slide bearing at least one guitar pick-up; at an end of the slide destined to strike against a body of the instrument is located a plug which is couplable with a multicore socket fixed to the body of the instrument and electrically connected to a jack socket.

Further characteristics and advantages of the present invention will better emerge from the detailed description that follows, of an embodiment of the invention, illustrated in the form of a non-limiting example in the accompanying drawings, in which:

figure 1 is a perspective partial view of the instrument of the invention;

figure 2 is a possible electrical connection setup

between a pick-up and a jack socket 11.

With reference to the drawings, an electric guitar 1 provided with a body 2 has mounted thereon a bridge 10 to support strings 3, which strings are tensioned at a predetermined distance from the body 2. A usual-type pick-up 4, also located on the body 2 of the guitar 1, generates electrical signals corresponding to the sounds generated by the strings 3. Said electrical signals are sent to a jack socket 11, predisposed on the body 2, by which they are sent on to, for example, an external amplifier.

The pick-up 4 is mounted on a slide 5 which is slidable in a straight direction on guides 6 mounted in the body 2. The preferred embodiment illustrated in the figures exhibits two slides, each bearing a pick-up.

The guides 6 are arranged on a parallel plane to the strings 3, and more precisely on lateral walls of a recess 7 cut into the body 2. A multicore socket 8, connected up, for example, to an electrical circuit such as the one shown in figure 2, is arranged on a frontal wall of the recess 7.

A plug 9 is mounted on the slide 5, which plug 9 is predisposed to mate with the multicore socket 8 and which plug 9 is electrically connected to the pick-up on the slide 5.

The recess 7 is laterally defined by walls which extend at one end up to an edge of the body 2, giving rise to an aperture into and out of which a slide 5 can be fully inserted or removed. Thus the slide 5 can run on the guides 6 from a first, endrun position in which the pick-up 4 is positioned between the body 2 and the strings 3 and wherein the plug 9 is coupled in the socket 8, and a second position, in which the slide 5 is fully extracted from the guides 6. In the first position the pick-up 4 is correctly situated for playing; that is, the magnets of the pick-up 4 are situated each below a string 3.

Preferably, but not necessarily, the slide 5 superiorly exhibits a block 12 shaped such as to complete an original external configuration of the body 2 by filling in the recess 7.

Between the multicore socket 8 and the jack socket 11, a plurality of sound processing circuits 1, of known type, can be provided, each of which is electrically connected to a predetermined connection point on the multicore socket 8. An electric commutator 13 connects on command an output of one of said sound processing circuits 14 to the multicore socket 8. Adjustment circuits of, for example, volume, can be provided among said sound processing circuits 14, as is normal in musical instruments of this type. It is also possible to send a signal generated by the pick-up 4 directly to the jack socket 11; the signal will then be adjusted by means of the amplifier controls.

Mechanical means for adjustment (of known type and not illustrated in the figures) are also provided, which modify a distance between the guides 6 and

the strings 3, so that a best distance between said guides 6 and said strings 3 can be found; known systems are also provided for adjusting a height of the pick-up 4 with respect to the strings 3.

Thus a musician can change the timbre of his instrument simply by extracting the slide 5 and inserting another slide 5 in its place, which latter slide obviously bears a different pick-up 4. The instrument characteristics can therefore be radically changed with an operation lasting only a few seconds.

A further rapid adjustment of the instrument characteristics can be made by simply adjusting the commutator 13 and thus connecting the pick-up and the jack 11 through the desired circuit 14.

The invention enables several different types of pick-up to be tested out on a single instrument, simply by substituting the pick-ups 4.

Also noteworthy is the fact that thanks to the configuration of the guides and the slides, the pick-ups 4 can be substituted without interfering with the strings 3.

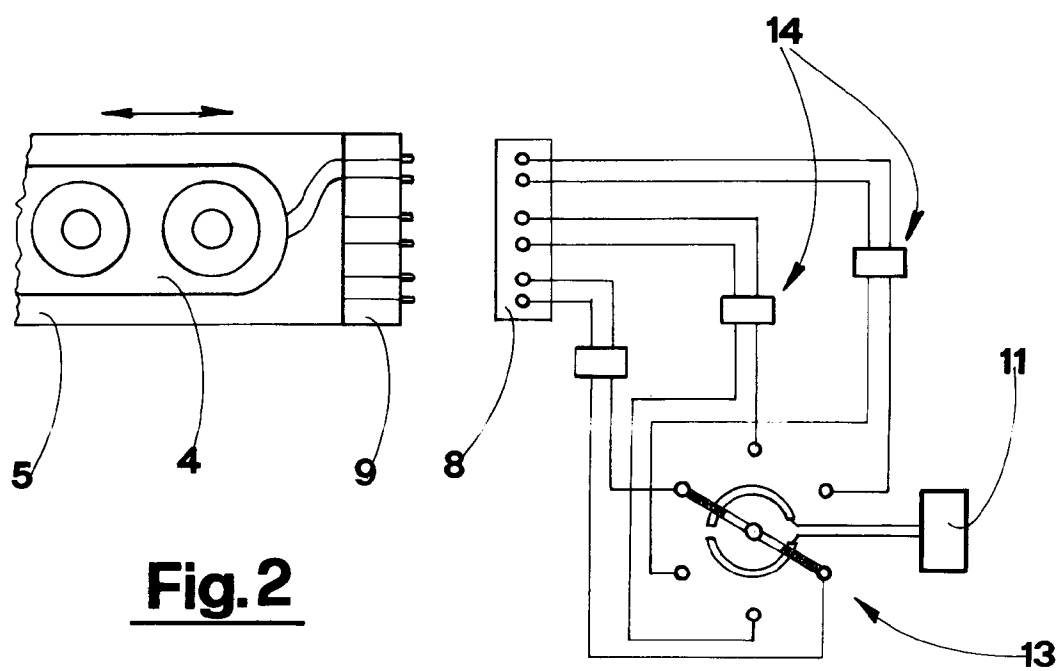
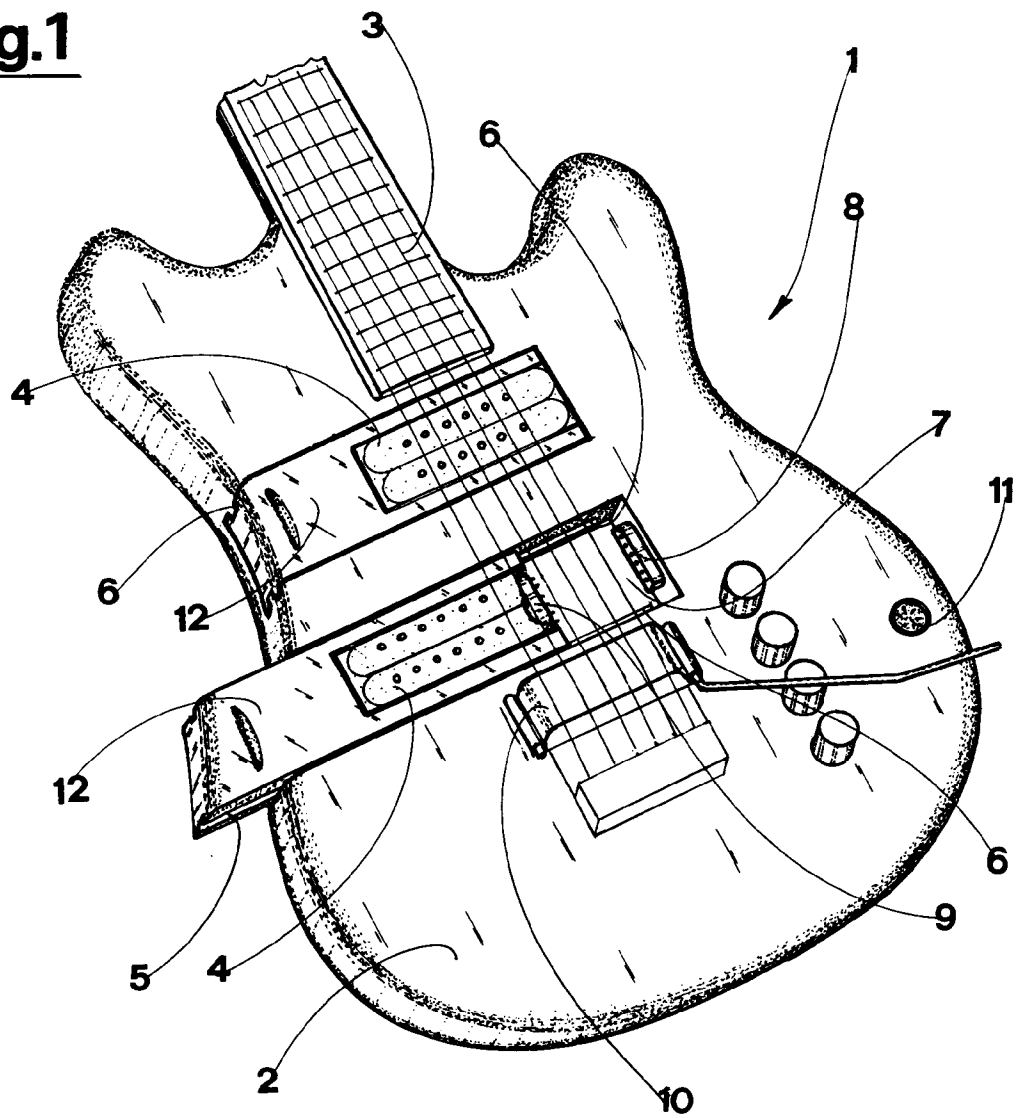
## Claims

1. An electrical stringed musical instrument, of the type comprising:  
a body (2), above which strings (3) are mounted and tensioned at a predetermined distance;  
at least one pick-up (4), fixed on the body (2) at a predetermined distance from the strings (3), for generating electrical signals corresponding to sounds generated by the strings (3), which electrical signals are sent on to a jack socket (11) provided on the instrument;  
characterized in that each of the at least one pick-up (4) comprises:  
a multicore socket (8), fixed to said body (2) and electrically connected to the jack socket (11);  
guides (6), arranged on the body (2);  
a slide (5) bearing the at least one pick-up (4);  
a plug (9), for coupling with the multicore socket (8), which plug (9) is mounted on the slide (5) and electrically connected to the pick-up (4);  
said slide (5) being slidable on the guides (6) between a first position, wherein the pick-up (4) is arranged between the body (2) and the strings (3) and wherein the plug (9) is inserted in the multicore socket (8), and a second position wherein the slide (5) is completely extracted from the guides (6).
2. A musical instrument as in claim 1, characterized in that the guides (6) are arranged on a parallel plane to the strings (3).
3. A musical instrument as in claim 1, characterized in that it comprises a recess (7) cut into the body

(2), which recess (7) is provided with lateral walls bearing the guides (6), an end of which lateral walls extend as far as an edge of the body (2), another end of which lateral walls extend as far as the multicore socket (8).

4. A musical instrument as in claim 3, characterized in that it comprises a block (12), solidly mounted on the slide (5), which restores an original configuration of the musical instrument, which original configuration has been changed by the recess (7).
5. A musical instrument as in claim 1, characterized in that between said multicore socket (8) and the jack socket (11) a plurality of processing circuits (14) of an electrical signal are provided, each of which plurality of processing circuits (14) is electrically connected to predetermined points of connection in the multicore socket (8); an electric commutator (13) being provided for connecting on command an output of a chosen circuit of the plurality of processing circuits (14) with the jack socket (11).
6. A musical instrument as in claim 3, characterized in that it comprises known-type mechanical means for adjusting a distance between the guides (6) and the strings (3) of the instrument.

**Fig.1**



**Fig.2**



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# EUROPEAN SEARCH REPORT

Application Number  
EP 95 83 0036

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	FR-A-2 664 415 (BETTICARE OLIVIER) 10 January 1992 * page 4, line 8 - page 5, line 34; figures 1,3 *	1-6	G10H1/32 G10H3/18
X	US-A-4 433 603 (SIMINOFF ROGER) 28 February 1984 * column 5, line 45 - column 7, line 6; figures 2,9,10 *	1-5	
X	FR-A-2 609 826 (GAUCHER DANY) 22 July 1988 * page 2, line 4 - line 24; figures 2A,2B,7 *	1-5	
X	FR-A-2 638 882 (GAUCHER DANY) 11 May 1990 * page 2, line 4 - line 26; figures 2A,2B *	1-5	
A	GB-A-2 045 993 (STACCATO RESEARCH & DEV) 5 November 1980 * page 1, line 69 - line 90 * * page 2, line 46 - line 84; figures 2,6 *	1-6	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			G10H
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27 July 1995	Examiner Pulluard, R
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