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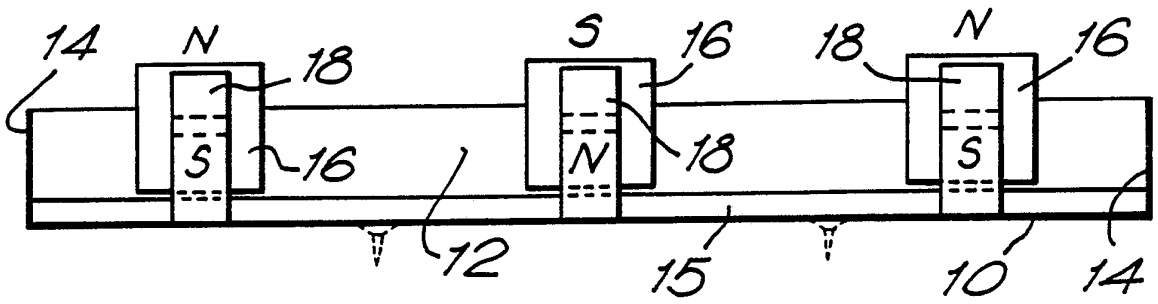

(57) Abstract

A magnetic pickup for a guitar or other stringed instrument comprises at least two magnet assemblies (16) mounted for sliding movement independently of each other in the direction of the strings, the two magnet assemblies being oppositely poled relative to the strings and provided with respective pickup coils. The magnet asssemblies can be slid even whilst playing and the ability to move them to different positions provide for a considerable variety in the tones and sounds which can be produced on the instrument.

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SLIDING MAGNETIC PICKUP

This invention relates to a sliding magnetic pickup for an electric guitar, bass or similar stringed instrument.

A magnetic pickup comprises a magnet with one of its poles adjacent the iron strings of the guitar or other instrument, the magnet being wound with a coil. When a string is plucked, this causes the magnetic field to fluctuate at the same frequency and a corresponding small electric signal is induced in the coil. This signal provides the input to an amplifier to provide the audio output. A second such magnet may be provided, also with a pole adjacent the strings, but this pole being opposite to that pole of the first magnet which is adjacent the strings: thus the two magnets apply opposing magnetic fields to the strings. The coils of these two magnets can be connected in series of or in parallel, and in either case because the two magnets are oppositely poled, they cancel out the "hum" which is induced in each of them from stray radiations e.g. from the mains.

I have now devised a pickup which enables a very wide variation in sounds and tones to be produced from a given instrument.

In accordance with this invention, there is provided a magnetic pickup in or for a guitar, bass or similar stringed instrument, comprising at least two magnet assemblies mounted for sliding movement independently of each other

in the direction of the strings, the two magnet assemblies being oppositely poled relative to the strings and provided with respective pickup coils.

The pickup coils of the magnet assemblies may be connected in series or in parallel (and a switch may be provided to enable the player to change this connection readily), and in each of these cases the "hum" will be cancelled. A further switch may be provided to enable the player to cut out one of the coils readily, so that only the other coil is in use. These changes provide for a considerable variety in the tones and sounds which can be produced on the instrument, but this range is very markedly extended by sliding the two magnet assemblies at will to selected positions. Preferably the pickup is arranged so that the magnet assemblies can be slid even while playing. The extent of movement of the magnet assemblies is only limited by the space between the bridge of the instrument and the end of its fingerboard.

The pickup may include three magnet assemblies, the middle one oppositely poled to the other two, or one of the end assem blies oppositely poled to the other two. With all three magnet assemblies able to slide independently of each other, the range and variety of sounds and tones is even further extended.

Each magnet assembly may comprise a single bar-type magnet with one of its long faces of a given pole and positioned across and below the strings. Instead, each assembly may comprise a plurality of pole pieces, one for each string, with like poles directed at the respective strings.

An embodiment of this invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a diagrammatic longitudinal section through a pickup in accordance with this invention;

Figure 2 is a diagrammatic cross-section through the pickup of Figure 1, and

Figure 3 is a plan view of the pickup of Figures 1 and 2.

The example of pickup which is shown has a base 10 and side and end walls 12, 14 and this is mounted in a well provided in the instrument body between its bridge and the end of the fingerboard, below the strings. The pick-up has a pair of plastic rails 15 to which the magnet assemblies 16 (three in the case illustrated) are mounted, being slidable independently of each other along these rails. Each magnet assembly is provided with spring plastic clips 18 at its opposite ends, these clips normally pressing at their lower ends into the grooved sides of the rails so that the magnet assembly is prevented by friction from slide. In order to side the magnet assembly, the upper ends of its two clips 18 are pressed towards each other (by the player's thumb and finger) in order to relieve this frictional engagement.

Whilst this one particular arrangement for mounting the magnet assemblies is shown, others may be used and the principle of the invention is simply that the magnet assemblies should be slidable independently of each other at the will of the player. In their different positions, the slidable assemblies pick up different mixes of harmonics from the different positions along the strings, enabling a wide variation in tones and sounds to be produced from the instrument.

Further in the particular example shown, the middle one of the three magnet assemblies is poled oppositely to the other two, and each assembly comprises a bar-type magnet wound with a coil. However, these details may be different, as previously mentioned.

CLAIMS

1. In or for a guitar, bass or similar stringed instrument, a magnetic pickup comprising at least two magnet assemblies mounted for sliding movement independently of each other in the direction of the strings, the two magnet assemblies being oppositely poled relative to the strings and provided with respective pickup coils.

2. A magnetic pickup as claimed in claim 1, provided with a switch operable by the player for connecting the pickup coils selectively in series or parallel.

3. A magnetic pickup as claimed in claim 1, provided with a further switch operable by the player to cut out a selected one of the pickup coils.

4. A magnetic pickup as claimed in claim 1, comprising three said magnet assemblies with one oppositely poled relative to the other two.

5. A magnetic pickup as claimed in Claim 1, in which each magnet assembly comprises a single bar-type magnet having one of its long faces of a given pole and positioned across and below the strings.

6. A magnetic pickup as claimed in Claim 1, comprising a pair of slide rails between which each magnet assembly is mounted, being slidable independently of the other(s), and in which each magnet assembly is provided with a pair of spring clips (one at its opposite ends), which clips have lower ends which normally press into the sides of said rails to provide a grip preventing the magnet assembly from moving along the rails, and the clips further having upper ends which can be pressed towards each other by the player to relieve this grip and enable sliding movement of the respective magnet assembly.

FIG.1.

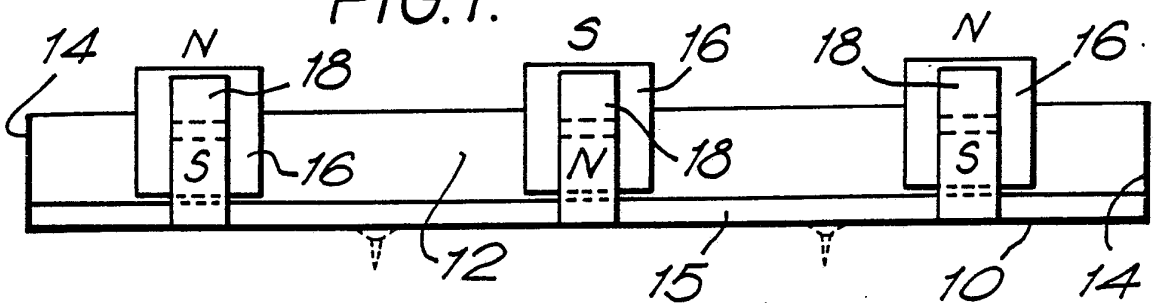


FIG.2.

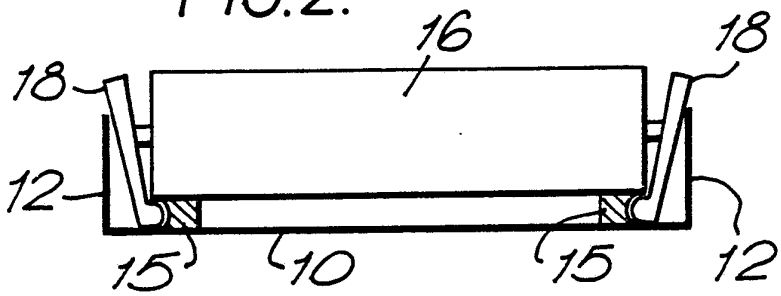
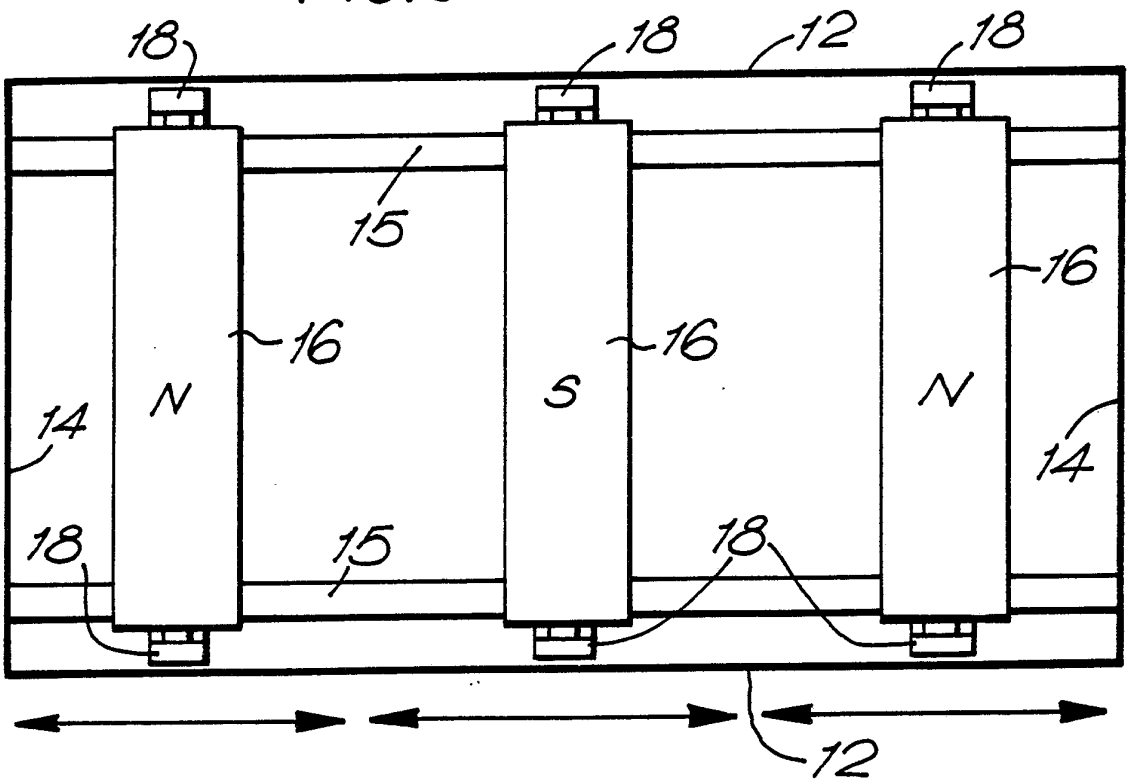


FIG.3.



INTERNATIONAL SEARCH REPORT

International Application No PCT/GB 86/00592

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) [6]

According to International Patent Classification (IPC) or to both National Classification and IPC

IPC[4]: G 10 H 3/18

II. FIELDS SEARCHED

Minimum Documentation Searched [7]

Classification System	Classification Symbols
IPC[4]	G 10 H 3/00

Documentation Searched other than Minimum Documentation to the Extent that such Documents are included in the Fields Searched [8]

III. DOCUMENTS CONSIDERED TO BE RELEVANT [9]

Category [10]	Citation of Document, [11] with indication, where appropriate, of the relevant passages [12]	Relevant to Claim No. [13]
A	US, A, 2964985 (J.D. WEBSTER) 20 December 1960 see column 3, lines 47-55; claims 1-3; figure 5 --	1,6
A	GB, A, 2086121 (K.N.G. NUNAN) 6 May 1982 see page 1, lines 16-27; page 2, lines 30-42; figures 1,2 --	2,3,5
A	US, A, 4222301 (A.F. VALDEZ) 16 September 1980 see claim 5 --	2
A	US, A, 4581975 (C.L. FENDER) 15 April 1986 see figure 2	4

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* Special categories of cited documents: [10]

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IV. CERTIFICATION

Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report
19th June 1987	23 JUL 1987
International Searching Authority	**Signature of Authorized Officer**
EUROPEAN PATENT OFFICE	M. VAN MOL

ANNEX TO THE INTERNATIONAL SEARCH REPORT ON

INTERNATIONAL APPLICATION NO. PCT/GB 86/00592 (SA 14773)

This Annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on 03/07/87

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US-A- 2964985		None	
GB-A- 2086121	06/05/82	US-A- 4379421	12/04/83
US-A- 4222301	16/09/80	None	
US-A- 4581975	15/04/86	None	