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FRET BOARD FOR STRINGED INSTRUMENTS

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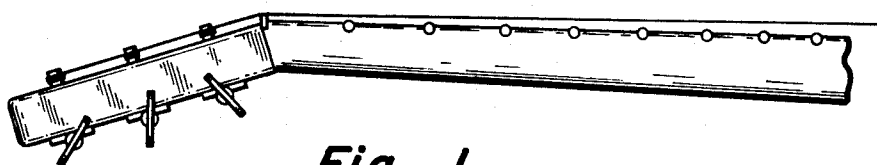


Fig. 1

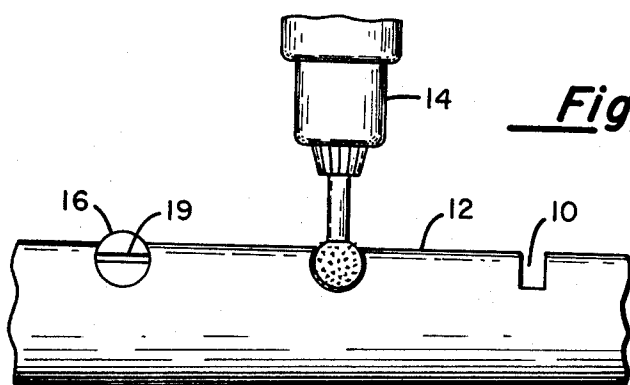


Fig. 2

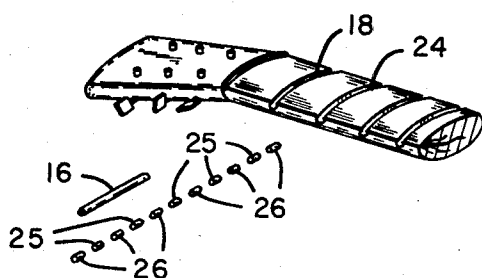


Fig. 3

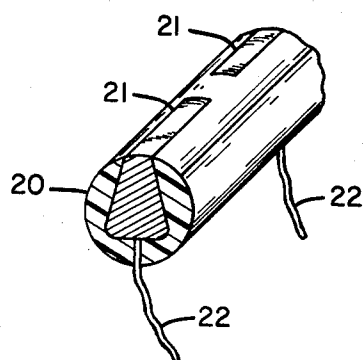


Fig. 4

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FRET BOARD FOR STRINGED INSTRUMENTS

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7 Claims

ABSTRACT OF THE DISCLOSURE

A fret board for a stringed musical instrument in which frets are formed by sliding circular cross section metal or plastic members into circular cross section grooves in the surface of the fret board. When worn the frets are easily replaceable without damage to the fret board. Also the plastic fret members may have conducting metal portions molded therein to provide contacts for organ type circuits.

BACKGROUND OF THE INVENTION

Prior art frets typically comprise generally T-shaped members which have small retaining barbs on the stem of the T. The frets are pressed into slots in a wooden key-board where they are retained by the barbs. When the frets wear out they must be extracted and replaced. However, the barbs tear the wood upon extraction making it difficult to install new frets which are both properly aligned and properly secured. Thus, this is an expensive, damaging, and time consuming task with less than satisfactory results. My invention contemplates a new type of fret construction applicable to use with both new fret boards as well as fret boards already fitted with the prior art type of fret which invention avoids all of the above mentioned difficulties.

BRIEF SUMMARY OF THE INVENTION

In the instant invention a new fret board is first provided with a slot at the proper fret location. In the alternative an old guitar having the prior art type of fret construction may also be used in which a slot is cut in the exact location where the old fret used to be. This slot is then routed out by means of a spherically shaped router so as to provide a circular groove in the wood of the fret board. A circular cross section piece of plastic or metal is then slid into this hole from the side of the fret board the hole being deep enough to allow a portion of the plastic or metal to show above the surface of the board providing a fret surface. The preferred material for forming this fret is nylon although other types of plastic and metals such as spring steel may be used as well. A remarkable improvement in tone has been found to result from this type of fret and is believed that this improvement is due to the fact that the fret is so completely buried in the wood. In addition, when these frets wear out they are quite easy to replace by simply sliding them out from the fret board in a sideways direction and reinserting a new fret. Because of the round surface of the fret and the relatively low friction nature of nylon notes can be easily slurred since the string can be slid sideways on the fret plate easily. Even better for this purpose are frets formed from circular cross section polytetrafluoroethylene material which has even a lower coefficient of friction. Another variation involves casting a plastic fret with metal parts in it to provide electrical contacts for an organ type circuit. This embodiment will be discussed in greater detail later on. It may therefore be seen that it is an object of my invention to provide an improved fret and fret board construction. Further objects and advantages will become apparent from the following drawings and description.

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BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side view of a portion of a guitar fret board showing the relative positions of the installed frets.

FIG. 2 shows a side view of a short section of a fret board having three different frets in various stages of preparation.

FIG. 3 shows a portion of a fret board showing how a single fret may be installed or how segmented frets may be installed.

FIG. 4 shows a possible fret construction wherein nylon is molded with metal inserts to provide electrical contacts on the frets.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring simultaneously to FIG. 1 and FIG. 2, portions of a fret board according to the present invention are shown. At the proper location for the fret, a rectangular slot 10 is sawed into a fret board 12 with a conventional saw or other means. The slot is then circularized in cross section by drawing a rotating spherical router 14 through the slot. As shown in FIG. 3 a circular cross section nylon fret 16 is then slid in from the end of the circular slot. By lubricating fret 16 with graphite the entry can be made more easily. However, in the preferred embodiment another good method of installing the fret is to provide a slot 19 in the end of the fret such as shown in FIG. 2 and twist the fret into place with either a screw driver or an electric drill type of tool. Whether the fret board is flat such as shown in FIGS. 1 and 2 or curved such as shown in FIG. 3 makes little difference because a nylon fret is flexible enough to follow a curved groove. It is obvious from the description so far that these frets may be easily replaced whenever one of them wears out without damaging the wood in the fret board.

A remarkable improvement in tone has been noted in the use of these frets and it is believed that this improvement in tone results from the fact that the greater portion of the fret 16 is completely buried in the wood portion of the fret board, thus, providing a more solid contact with the wood.

The present fret construction also lends itself to an improvement in providing isolated electrical contact type frets such as would be useful in the apparatus disclosed in Pat. 3,530,226 for a "Stringed Guitar With Electronic Organ Tone Generators Actuated With Fingerboard Switches" invented by Richard L. Wheeler and Donald J. Terlinde and in Pat. 3,530,227 for a "Stringed Guitar With Electronic Organ Tone Generator Actuated With Fingerboard Switches" invented by R. L. Wheeler and Donald J. Terlinde. In the above referenced patents electronic tones are generated by making an electrical contact between the string and electrically isolated frets. In FIG. 4 a portion of a circular fret 20 is shown which is molded with metallic inserts 21 therein connected to electrical leads 22. Since nylon is a natural insulator these frets can be used to make the electrical circuits described in the above referenced patents while still allowing the easy replacement characteristic of the present invention. In FIG. 3 another possibility is disclosed wherein alternate short sections of nylon 25 are used to space a series of short metal frets 26 in a circular slot 24 so as to provide a series of electrically isolated fret contacts. Certainly other variations within the spirit and scope of the present invention will come to mind which cannot be completely encompassed here and therefore the following claims are presented.

I claim:

1. A fret for stringed musical instruments comprising an elongated member of generally circular cross section combined with a wooden fret board for a musical instru-

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ment said fret board having a series of grooves therein of generally circular cross section sized to accept by a friction fit said elongated member and of a depth such that only a portion of the side of said elongated member projects above the surface of the fret board, said projecting portion comprising less than half of the elongated member so that the elongated member is retained in said grooves.

2. The apparatus of claim 1 in which said elongated member is formed from plastic.

3. The apparatus of claim 2 including electrical contacts molded into said plastic elongated member.

4. The apparatus of claim 1 in which said elongated member is formed of metal.

5. The apparatus of claim 1 in which said elongated member is formed from nylon.

6. The apparatus of claim 1 in which said elongated member is formed from both plastic and metal.

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7. The apparatus of claim 1 in which said fret board and grooves are curved and said elongated member is flexible enough to follow said curved grooves.

References Cited

UNITED STATES PATENTS

3,324,755	6/1967	Canonico	84—267
3,273,439	9/1966	Keefe et al.	84—314
3,196,729	7/1965	Burns et al.	84—1.16 UX
1,795,825	3/1931	Bonner	84—314
1,727,620	9/1929	Smith	84—314

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