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NUT FOR STRINGED MUSICAL INSTRUMENTS

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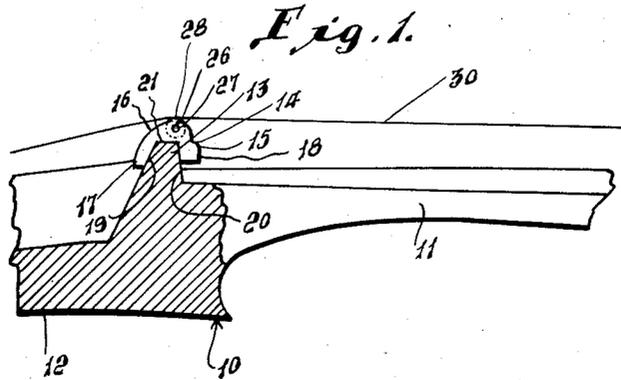


Fig. 2.

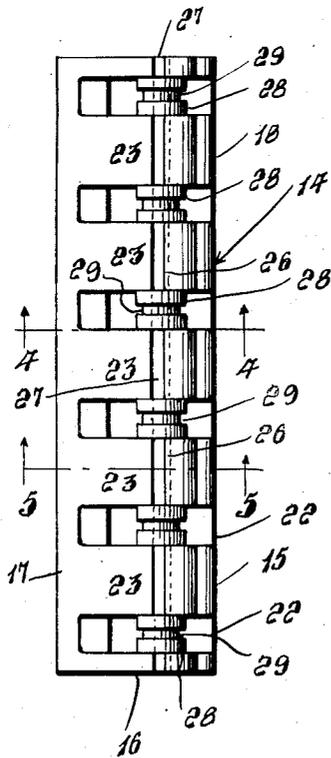


Fig. 3.

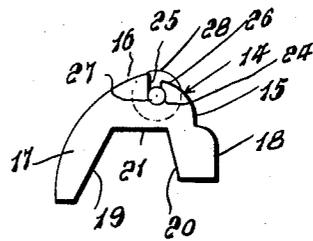


Fig. 4.

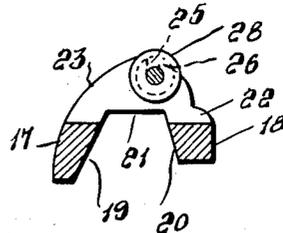
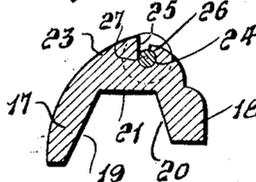


Fig. 5.



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## NUT FOR STRINGED MUSICAL INSTRUMENTS

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4 Claims. (Cl. 84—314)

This invention relates to an improved nut adapted for use on various types of manually played stringed musical instruments such as a guitar, violin and banjo.

Guitars, violins, banjos and other similar musical instruments are generally provided with a nut having a plurality of slots through which the strings of the instrument extend. In tuning the strings it is very difficult to obtain the desired pitch due to the fact that the strings stick in the slots of the nut and move only intermittently and with jerks so that the strings usually do not reach the correct pitch but are either a little flat or a little sharp. This is especially true where the strings have been in use for a considerable length of time. Furthermore, after the instrument is tuned the strings are usually stuck in the slots of the nut so that they are not taut between the nut and tuning pegs or keys so that after the strings have been picked for a little while they pull loose and are soon out of tune.

It is the primary object of this invention to provide a nut having means whereby the strings of a musical instrument after they have once been stretched, which requires only a few hours, may be tuned to the exact pitch and will stay in tune for a much longer period than strings stretched over the type of nuts heretofore in use.

Still a further aim of the invention is to provide an improved nut by means of which the pitch or tone of the strings may be raised or lowered smoothly and evenly to enable the artist to quickly and readily obtain the proper pitch for each string.

More particularly, it is an object of this invention to provide a nut adapted to be removably mounted on the conventional nut of a stringed instrument, such as a guitar, and which is provided with a plurality of rotatably mounted rollers each provided with a groove to receive a string so that the strings may be readily moved relatively to the nut to prevent frictional engagement between the strings and nut.

Other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, which illustrates a preferred embodiment thereof, and wherein:

Figure 1 is an end view in elevation of the invention shown mounted on the nut of a stringed musical instrument, which is shown fragmentarily and partly in section and partly in elevation,

Figure 2 is a top plan view, on an enlarged scale, of the invention,

Figure 3 is an end view in elevation of the same, and

Figures 4 and 5 are transverse vertical sectional views taken along the lines 4—4 and 5—5, respectively, of Figure 2.

Referring more particularly to the drawing, wherein like reference characters designate like or corresponding parts throughout the different views, 10 designates generally a portion of a stringed instrument such as a guitar which includes a portion of the neck thereof designated 11, a portion of the pegbox designated 12, and the conventional nut, designated 13. These parts are of conventional construction and are shown merely to illustrate the invention which will hereinafter be described.

The invention comprises a demountable nut, designated generally 14, and including the member 15 having the intermediate portion 16 and the spaced depending legs 17 and 18. Legs 17 and 18 have the inner sides 19 and 20, respectively, which are disposed diagonally to the underside 21 of the intermediate portion 16 and which are disposed in outwardly diverging relationship relatively to each other. The member 15 is adapted to be removably mounted on the nut 13 with its portion 21 resting on the top edge of the nut 13 and with the side 19 of leg 17 disposed against the back side of the nut 13 and the side 20 of leg 18 disposed against the front side of nut 13 to removably mount the member 15 thereon. The relative length of the legs 17 and 18 and the angle of their sides 19 and 20 as well as the width of the bottom portion 21 may vary depending upon the precise size and shape of the nut on which the member 15 is adapted to be mounted, which may vary in different instruments, so that the particular shape and size of the member 15 may obviously be varied and its shape as shown is merely intended to illustrate its application with the nut 13 of conventional shape.

The intermediate or head portion 16 is provided with a plurality of spaced transverse slots 22 which preferably extend into the legs 17 and 18 and through the bottom edge 21 of portion 16. Portion 16 is divided by the slots 22 into a plurality of spaced bridges 23 each of which is provided with an alined opening 24 having a restricted slot 25, formed by the lip 26, which opens outwardly of the top thereof.

A shaft 27 extends through the alined openings 24 of the bridges 23 and is preferably secured fast therein, with spaced apart portions of the shaft 27 extending through the slots 22. A plurality of

rollers 28 are journaled on the shaft 27 with one of the rollers disposed within each of the slots 22. Rollers 28 are provided with the annular grooves 29 in their peripheries to receive the strings of the guitar or instrument 10, a portion of one of which is shown at 30, in Figure 1.

From the foregoing it will be seen, that the nut 14 is adapted to be removably mounted on the nut 13 to support a plurality of strings 30 each of which extends through a groove 29 of one of the rollers 28. The tension of the strings 30 will be sufficient to retain the nut 14 in position on the instrument 10, and the sides 19 and 20 may also provide a sufficiently tight fit to hold the nut 14 against accidental movement relatively to the nut 13. It will thus be seen that the strings 30 may be readily tightened or loosened by the pegs or keys, not shown, and as the strings move relatively to the nut 14 the roller 28 supporting the strings will be revolved to thereby prevent the strings from sticking in the grooves 29.

Nut 14 has been shown as having six slots and six rollers and is adapted for use on six stringed instruments such as a guitar. Obviously, the nut 14 could be provided with a greater or less number of slots and rollers depending upon the type of instrument with which it is to be used and the number of strings that the instrument is provided with.

Various modifications and changes in the precise construction and arrangement of the parts forming the invention are contemplated and may obviously be resorted to, and the right is therefore expressly reserved to make such variations and changes as do not depart from the spirit and scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. A detachable nut for stringed musical instruments comprising a head portion having depending spaced legs adapted to engage the nut of a musical instrument and to be removably mounted thereon, said head portion having a

plurality of transverse slots, a shaft mounted in said head portion and disposed longitudinally thereof, said shaft extending through each of said slots, a plurality of rollers journaled on said shaft and disposed in said slots, and the periphery of each of said rollers being grooved.

2. A demountable guitar nut comprising a member provided with a longitudinal outwardly diverging groove in its underside forming depending spaced sides adapted to removably engage the nut of a stringed instrument, the upper portion of said member being provided with a plurality of transverse slots, a shaft disposed in said member and extending transversely through each of said slots, and a plurality of grooved rollers journaled on said shaft, one of said rollers being disposed within each of said slots.

3. An attachment for stringed musical instruments, said attachment comprising a member provided with depending spaced side portions adapted to demountably engage a nut of a stringed instrument, the upper portion of said member being provided with a plurality of spaced transverse slots, a shaft extending through said upper portion and through each of said slots, and a plurality of grooved rollers journaled on said shaft and disposed within said slots.

4. A demountable nut for stringed musical instruments, comprising a member provided with a longitudinal groove in its underside, extending the length thereof and diverging outwardly to removably engage the nut of a stringed instrument, said member having a plurality of spaced transverse slots in its top forming spaced ribs therebetween, said ribs having corresponding alined openings provided with restricted slots opening outwardly of the tops of said ribs, a shaft mounted in said alined openings and extending through the transverse slots, and a plurality of rollers, having grooved peripheries, journaled on said shaft, one of said rollers being rotatably mounted in each of said transverse slots.

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