Jan. 31, 1939. H. G. FINNEY 2,145,718

STRINGED MUSICAL INSTRUMENT

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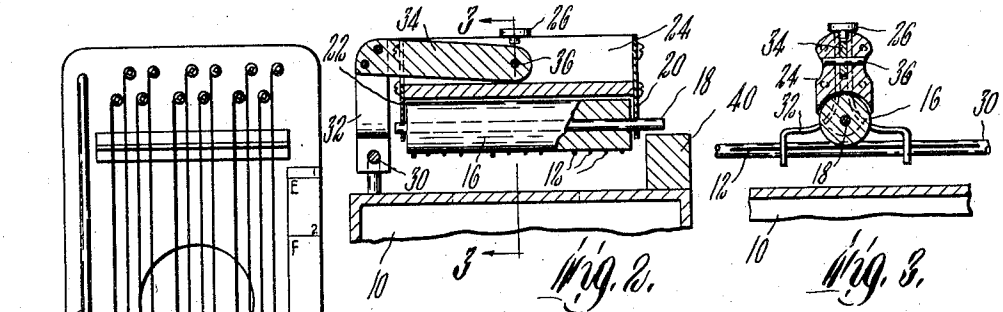



Fig. 2.




Fig. 3.

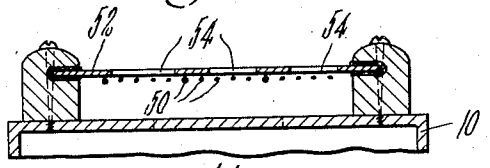



Fig. 5.

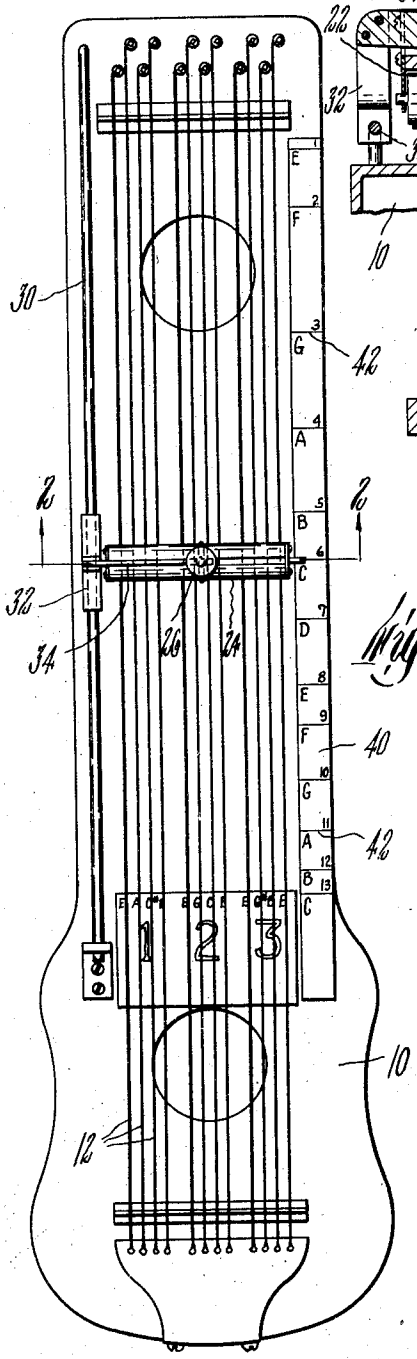



Fig. 1.

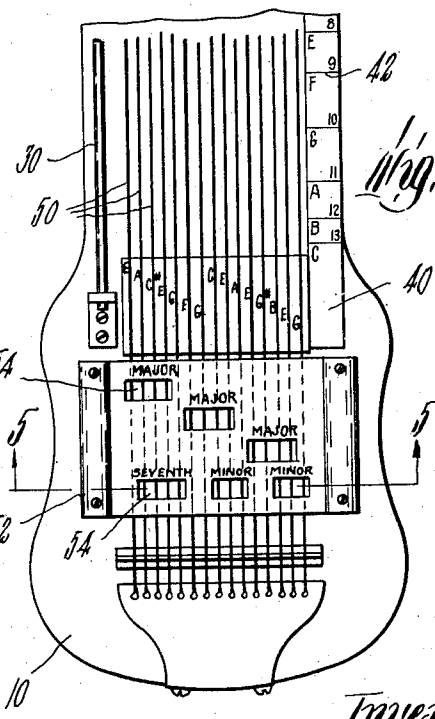



Fig. 4.

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## STRINGED MUSICAL INSTRUMENT

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2 Claims. (Cl. 84—317)

This invention relates to a stringed musical instrument having a set of strings adapted to be tuned to produce one or more chords when played.

According to the invention, a novel fretting device is provided to engage the strings and to be movable lengthwise thereof so as to change the effective lengths of all of the strings simultaneously. Thus, if a group of strings is tuned to produce a certain chord, manipulation of the fretting device will alter the key of the chord without altering the relation of the individual notes of the chord to each other. The instrument may be provided with sufficient strings to form a plurality of chord-producing groups, and the fretting device may be constructed to engage all of these strings so that each chord of which the instrument is capable of producing can be simultaneously changed as to key by movement of the fretting device.

It is another object of the invention to provide a shield bridging a set of strings, the shield being provided with a plurality of suitable openings to expose various chord-producing groups of strings so that the strings of any such group can be readily played without danger of playing other strings not belonging to such group.

For a more complete understanding of the invention, reference may be had to the illustration of certain embodiments thereof on the drawing and to the following description thereof.

On the drawing,—

Figure 1 represents a plan view of a stringed musical instrument embodying the invention.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is a section on the line 3—3 of Figure 2.

Figure 4 is a fragmentary plan view of a modified form of instrument.

Figure 5 is a section on the line 5—5 of Figure 4.

As shown, the invention may be embodied in an instrument having a resonating body 10 on which are mounted a set of strings 12. In the instrument illustrated in Figure 1, the body 10 is elongated and is hollow for substantially its entire length. It is understood, however, that a portion of the length of the body may be in the form of a solid neck or other equivalent structure well known in the art. In the instrument shown, the strings 12 are all parallel to each other and are arranged in groups of four, there being three such groups shown. The strings of each group are adapted to be tuned so as to produce a chord, three different chords being available on the instrument shown. In order to change at will the key of the chords produceable on the groups of strings, a fretting device is provided adapted to be moved lengthwise of the strings so as to alter the effective length of the sounding portions thereof. As shown, this fretting device may include a cylindrical roll 16 of metal or any other suitable material, the roll being provided with an axle 18 which is journaled in end plates 20 and 22 of a holder 24. The holder may be provided with a finger button 26 to facilitate movement of the device up and down the strings by manual operation. For the guidance of the fretting device, a guide roll 30 is mounted on the body 10 parallel to the set of strings 12 and at one side therof. Slidable on the rail 30 is a carriage 32 having an arm 34 extending over the strings, the holder 24 being pivotally attached to the arm 34 as at 36. The pivot 36 is preferably at the mid-point of the holder 24 but may be otherwise located if desired. Due to the pivotal support of the holder 24 and the roll 16, the latter presses uniformly against the several strings 12 when the finger button 26 is pressed by the operator to ensure firm engagement of the roll against the strings.

Parallel with the strings 12 and at the side thereof remote from the guide rail 30 is a ridge 40 which projects above the plane of the strings 12 as indicated in Figure 2. The end of the axle 18 projects over a portion of the ridge 40 and is spaced a short distance above the ridge so as to engage the ridge if the button 26 is pressed excessively. Engagement of the extension of the axle 18 on the ridge 40 tends to prevent excessive depression of the strings 12. On the upper face of the ridge 40 suitable indicia 42 may be provided to guide the operator and to indicate the key of the chords corresponding to any position of the fretting element 16. The extension of the axle 18 may be employed as an index element to cooperate with the markings 42 on the ridge 40.

In Figure 4 is illustrated an instrument which in general may be similar to that shown in Figure 1. In the former, however, the strings 50 are preferably uniformly spaced from each other instead of being arranged in spaced groups as shown in Figure 1. In order to facilitate the playing of chords on the strings 50, a shield 52 is mounted on the body of the instrument so as to bridge the playing portions of the strings 50. This shield is provided with a plurality of openings 54, each opening exposing portions of a chord-producing group of strings, so that, by

playing the strings appearing in any one of the openings **54**, a suitable chord is produced. The shield **52** serves to facilitate the playing of the correct strings for the production of the desired chord, without danger of playing other strings not belonging to the desired group. In the instrument illustrated in Figure 4, the use of fifteen strings with six properly arranged openings **54** facilitates the playing of six different kinds of chords in the same key. As hereinbefore described, the key of all of these chords may be simultaneously altered as desired by the manipulation of a fretting device such as is illustrated in Figure 1.

It is evident that various modifications and changes may be made in the embodiments of the invention herein shown and described, without departing from the spirit or scope of the invention as defined in the following claims.

I claim:—

1. In a stringed musical instrument, a set of parallel strings, a guide rail parallel to said strings, a bracket having a portion slidable on said rail, a frame extending across said strings and pivoted centrally to said bracket, journals at the ends of said frame, and a roll mounted in said journals to roll on said strings and to be guided by said rail.

2. In a stringed musical instrument, a set of parallel strings, a guide rail mounted on one side of said strings and parallel thereto, a ridge at the other side of said strings projecting above the plane thereof, a fretting device including a cylinder resting on said strings and journal means for connecting said cylinder with said guide rail for guidance thereby, said cylinder having an axle element projecting over said ridge to prevent excessive downward movement of said cylinder when manually pressed and to act as an index, and indicia on said ridge cooperating with said index.

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