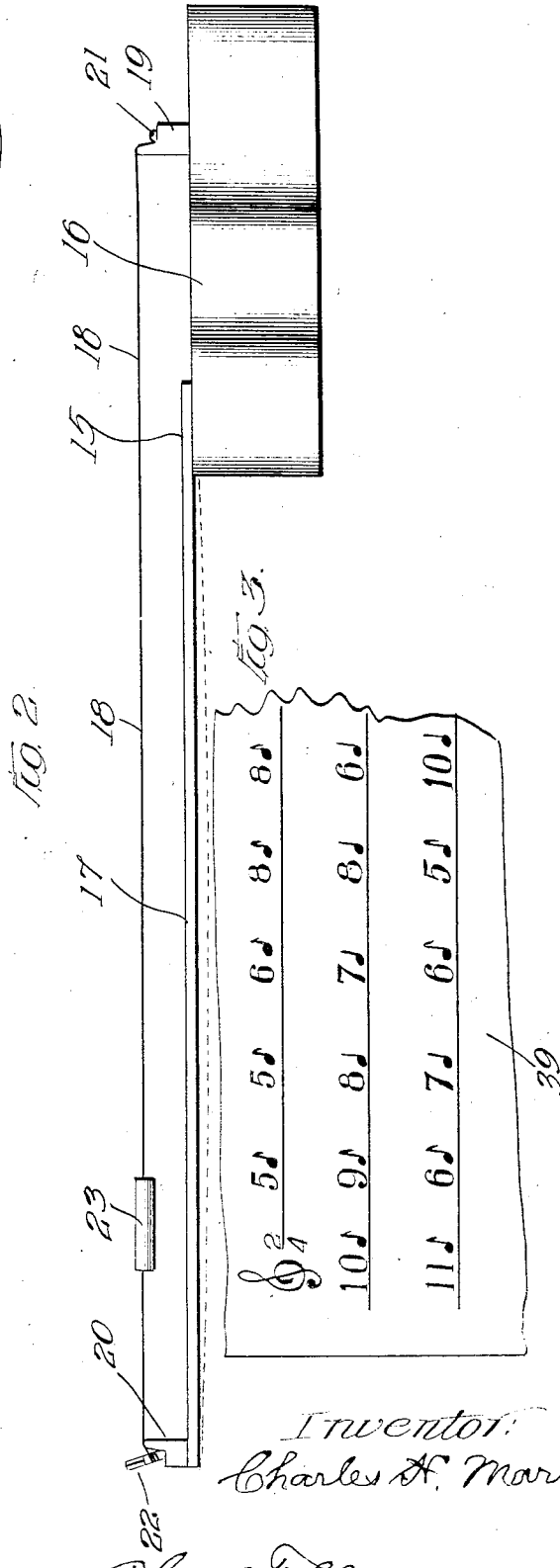
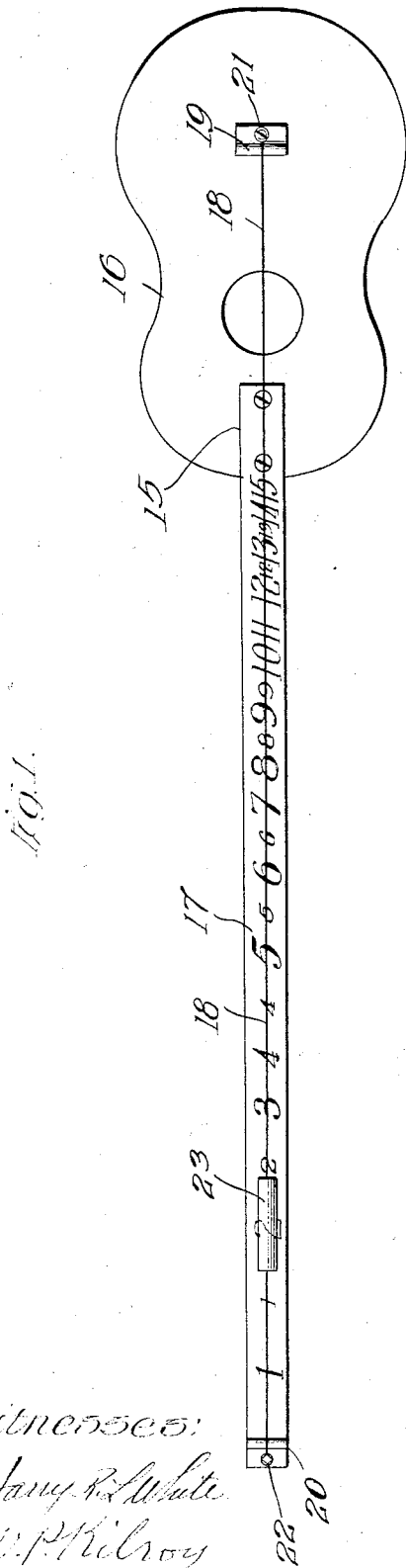


C. H. MARX.
 FRETTING DEVICE FOR STRINGED MUSICAL INSTRUMENTS.
 APPLICATION FILED DEC. 22, 1919.

1,371,506.

Patented Mar. 15, 1921.

3 SHEETS—SHEET 1.



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 W. P. Kilroy

Inventor:
 Charles H. Marx

By Chas. C. Hillman Atty

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Fig. 4.

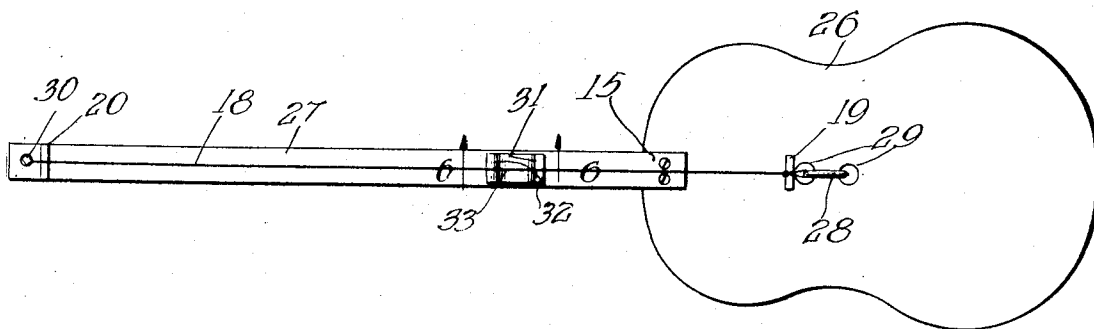


Fig. 5.

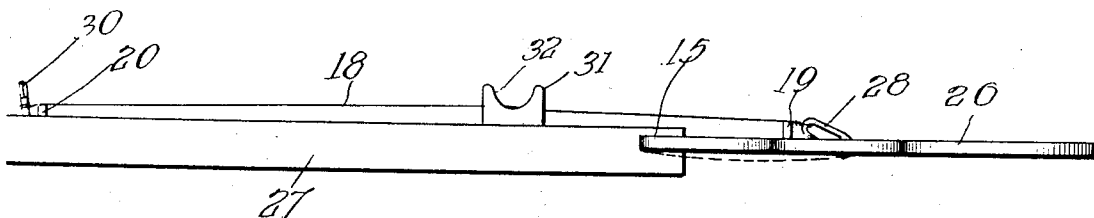


Fig. 6.

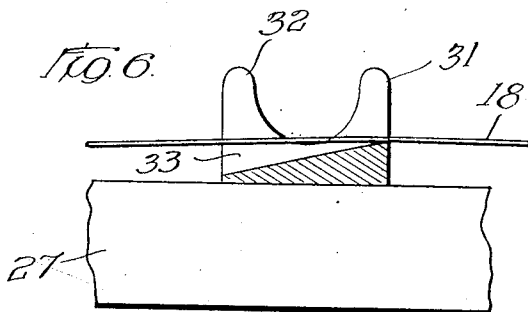


Fig. 7.

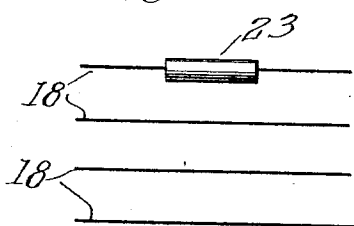
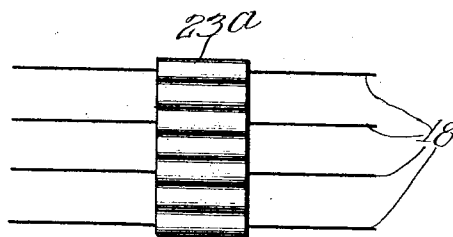


Fig. 8.



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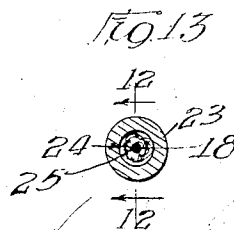
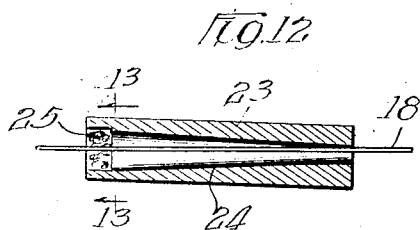
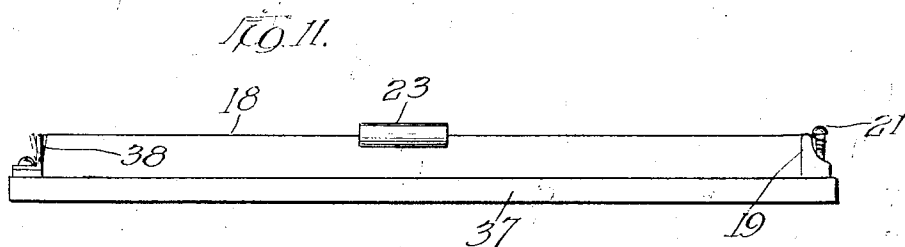
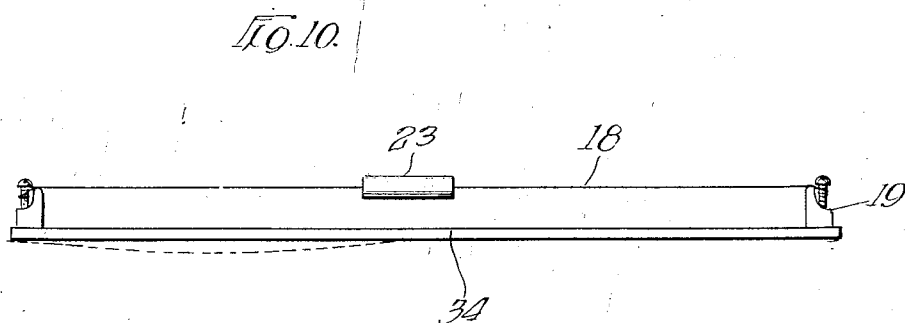
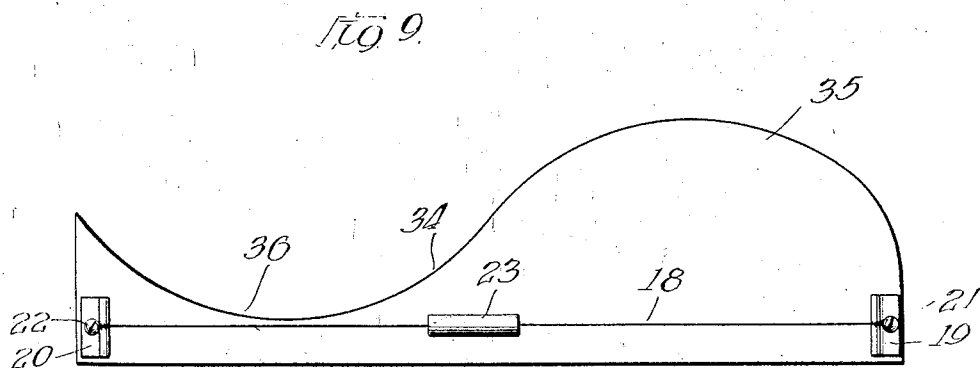
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UNITED STATES PATENT OFFICE.

CHARLES H. MARX, OF CHICAGO, ILLINOIS.

FRETTING DEVICE FOR STRINGED MUSICAL INSTRUMENTS.

1,371,506.

Specification of Letters Patent.

Patented Mar. 15, 1921.

Application filed December 22, 1919. Serial No. 348,490.

To all whom it may concern:

Be it known that I, CHARLES H. MARX, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Fretting Devices for Stringed Musical Instruments, of which the following is a specification.

The invention relates to improvements to be used in that type of stringed musical instruments wherein the musical notes or tones are produced by picking or striking the strings, as is done in playing a guitar, or by vibrating them, by means of a bow drawn across them, as in playing a violin, and it consists in certain peculiarities of the construction, novel arrangement, combination and operation of the various parts thereof as will be hereinafter more fully set forth and specifically claimed.

One of the important objects of the invention is to provide a slidably mounted fret for an instrument whereby a novice will be enabled to produce or render pleasing musical effects or renditions which can be equaled only by a skilled artist on a violin, guitar or similar instrument.

Another important object is to provide an instrument of the above named general character, which will always be in tune, *i. e.*, although the pitch may vary, the different tones of the scale will always be in their proper relation to each other.

Other objects and advantages of the invention will be disclosed in the following description and explanation.

In the accompanying drawings which serve to illustrate embodiments of the invention—

Figure 1 is a plan view of one form of the instrument showing a guide chart for a beginner displayed on the neck of the instrument.

Fig. 2 is a view in side elevation.

Fig. 3 is a face view of a portion of a sheet of music to be used in connection with the chart.

Fig. 4 is a plan view of a modified form of the instrument, which view also illustrates a modified form of the sliding fret.

Fig. 5 is a view in side elevation of the instrument and fret illustrated in Fig. 4.

Fig. 6 is an enlarged view partly in section and partly in elevation taken on line 6—6 of Fig. 4 showing parts of the neck

and string of the instrument as well as the modified form of the fret.

Fig. 7 is a plan view of a portion of a plurality of musical strings detached from the instrument showing one of them equipped with a sliding fret of the form illustrated in Figs. 1, 2, 12 and 13 of the drawings.

Fig. 8 is a similar view of like parts showing another modification in the construction of the sliding fret and illustrating it in engagement with a plurality of strings of the instrument.

Fig. 9 is a plan view of another modification in the construction of the instrument.

Fig. 10 is a view in side elevation thereof.

Fig. 11 is a side view of the instrument showing still another modification in its construction.

Fig. 12 is an enlarged longitudinal sectional view of the string supported sliding fret, and

Fig. 13 is a cross-sectional view taken on line 13—13 of Fig. 12.

Corresponding numerals of reference designate like parts throughout the different views of the drawings.

Referring now more particularly to Figs. 1, 2, 12 and 13 of the drawings, it will be seen and understood that the instrument consists of a supporting structure or body portion, a musical string mounted longitudinally thereon and a fret slidably mounted on the string. The supporting structure or body portion is designated as a whole by the reference numeral 15 and comprises a body 16 which is by preference elongated in shape, and an elastic neck 17 secured at one of its ends to the body 16 and extended longitudinally from said body. The supporting structure for the string 18 further comprises a pair of bridges 19 and 20 one of which is mounted on the upper surface of the body 16 and transversely thereof, while the other one is mounted transversely on the upper surface of the neck 17 at its free end. The string 18 is secured at one of its ends to the bridge 19 by means of a hitch pin or screw 21 and at its other end to the bridge 20 by means of a pin or screw 22 and extends across said bridges and rests in a taut condition on the upper surface thereof as will be readily understood.

Slidably mounted on the string 18 is a sliding fret 23 which is used to change the pitch of the string 18 so that the various

tones of the scale can be produced by sliding the fret back and forth on the string and vibrating the latter. This fret is by preference made of an elongated piece of metal, such as lead, and usually cylindrical in shape, with a tapered opening 24 extended longitudinally therethrough as is clearly shown in Fig. 12 of the drawings, in which view it will be observed and understood that said opening is tapered from its end opposite the body 16 toward the end thereof adjacent said body, and said opening has in its enlarged end a cushion or packing 25 surrounding the string 18 to prevent or lessen the vibration thereof between the fret and the outer end of the string. As the inner end of the fret 23 is always in contact with the string 18 it is obvious that the movement of the fret back and forth on the string will change the pitch of the latter so that the various tones of the scale can be readily produced by picking or otherwise vibrating the string.

As before stated the neck 17 of the supporting structure is elastic so that when the instrument is slightly moved or quivered by the operator, it will be flexed in a plane with the string 18, thus causing the pitch of the string to be raised and lowered slightly, thereby causing a pleasing tremolo effect which can be compared to the trembling effect produced by an expert violinist.

In Figs. 4 to 6 inclusive is shown a modification in the construction of the supporting structure or body portion 15 of the instrument as well as in the construction of the sliding fret, which modified form of the fret can be employed with the form of the instrument shown in Figs. 1 and 2 and above described, as well as with the instrument of the construction now under consideration. In the present construction the supporting structure for the string consists of a flat body 26 of elastic material, a rigid neck 27 secured to one end of the body 26 and extended longitudinally therefrom. This supporting structure also comprises a pair of bridges 19 and 20, one of which is mounted on the upper surface of the body 26 and transversely thereof, while the other one is mounted transversely on the upper surface of the neck 27 at or near its free end. The musical string 18 is secured at one of its ends to the body 26 by means of a fastening device 28 which may be in the form of a hook or open loop engaging openings 29 in the body 26. The other end of the string is secured to the neck 27 by a pin or screw 30 located outwardly from the bridge 20.

In the present modification the string 18 extends across the bridges 19 and 20 as in the other construction, and rests in a taut condition on the upper surface of said bridges. The sliding fret 31 shown in Figs. 4 to 6 inclusive and used in the present

modified construction of the instrument is by preference rectangular in shape and made of wood, and as shown has a flat surface base to rest on the neck 27 on which it may be slid back and forth. The fret 31 is provided transversely with a cut-away portion 32 semi-circular in shape for the reception of one of the fingers of the operator.

Extended longitudinally through the upper portion of the fret 31 is a kerf or narrow vertical slot 33 for the reception of the string 18 which is slightly exposed through the lower part of the cut-away portion 32 so as to permit the finger to contact therewith. As shown in Fig. 6 the bottom of the kerf or slot 33 is inclined downwardly from that end of the fret 31 adjacent to the body 26 to the other end of the fret, which arrangement will cause the string 18 to rest on the uppermost part of the bottom of the kerf and at the end of the fret adjacent to the body 26 so that when the fret is slid back and forth on the neck the pitch of the string 18 will be changed to enable the various tones of the scale to be produced by vibrating said string.

It is obvious that the fret 31 will be carried by the neck 27 and guided by the string 18 but when the form of fret shown in Figs. 1 and 2 and above described is employed said fret will be carried by the string and will always be in place thereon for the proper manipulation thereof.

As I may employ a plurality of strings instead of a single string mounted on the supporting structure of any of the forms herein illustrated and described, I have shown in Fig. 7 of the drawings a plurality of musical strings mounted side by side in parallelism with one another and one of said strings equipped with a fret 23 of the construction first above described, but said strings as being detached from the instrument. When an instrument embodying this arrangement of the strings is employed the fret can be moved back and forth on the string carrying the same for changing the pitch of said string while the other strings are tuned to drones and may be picked or vibrated to produce a chord.

In Fig. 8 is shown a similar arrangement of musical strings 18 detached from the instrument on any one of the forms of which they may be mounted and said strings equipped with a multiple fret 23^a that is, said fret is formed of a plurality of elongated members united together side by side and each member being of the construction shown in Figs. 12 and 13 and above described. In Figs. 9 and 10 I have shown another modification in the construction of the supporting structure of the instrument which consists in the employment of a body portion 34 of a single piece of material pos-

sessing sufficient elasticity to permit it to be flexed as indicated by dotted lines in Fig. 10 of the drawings.

In this modification the single piece 34 is widened from one of its ends to a point somewhat in advance of the longitudinal middle thereof as at 35 which may be called the body portion of the instrument. This body as shown has extended from said widened portion toward the other end of the said single piece a narrowed section or part 36, which by reason of its narrow construction will render said part or section more flexible or elastic than the body part 35. In this modification the supporting structure comprises the single piece 34, a pair of bridges 19 and 20, one of which is mounted on the upper surface of the body 35 and transversely thereof, while the other is mounted transversely on the upper surface of the neck or narrowed portion 36 at its free end. The musical string 18 is secured at one of its ends to the bridge 19 by means of a hitch pin or screw 21 and at its other end to the bridge 20 by means of a pin or screw 22 and extends across said bridges and rests in a taut condition on the upper surface thereof.

In Fig. 11 is shown still another modification in the construction of the instrument which consists in the employment of a supporting structure for the string consisting of a rigid body 37 having mounted thereon near one of its ends a transversely disposed bridge 19 and at or near its other end an elastic bracket 38 to which one end of the string 18 is directly connected in any suitable way. The opposite end of the string 18 is extended across the bridge 19 and connected to a hitch pin or screw 21 as in the other constructions. By this arrangement it is apparent that the resilient bracket 38 will cause the pitch of the string to be raised and lowered slightly when the instrument is moved slightly by the operator, in a similar manner to that shown in the other constructions of the instrument, and for a like purpose, to wit: to cause a pleasing tremolo effect.

While I have shown in Figs. 9 to 11 inclusive the string 18 of the instrument equipped with a fret 23 of the construction shown in Figs. 12 and 13 and above described, it will be understood that I may substitute therefor a fret 31 of the construction illustrated in Fig. 6 and above described. I also desire it to be understood that the chart illustrated in Fig. 1 of the drawings may be disclosed on the instrument in any of its forms. This chart is

designed for the use of beginners and is intended to be employed in connection with specially prepared sheets of music a portion of one of the sheets of which is illustrated in Fig. 3 of the drawings, by reference to which view it will be understood that all that is necessary to produce the desired notes indicated on the music sheet 39 is to move the fret till it registers with the character on the guide chart corresponding with the similar character on the piece of music which is being played by picking or vibrating the string.

The small figures on the chart designate the sharps and flats of the scale, while the larger figures indicate the natural tones.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is—

1. A musical instrument consisting of a supporting structure for a string including an elastic part, a pair of spaced bridges mounted on said structure, a musical string extended across said bridges in contact therewith and connected at its ends to the structure, and a fret slidably supported on the string.

2. A musical instrument consisting of a supporting structure for a string including an elastic part, a pair of spaced bridges mounted on said structure, a musical string extended across said bridges in contact therewith and connected at its ends to the structure, and an elongated fret having a longitudinal tapered opening therethrough, and slidably mounted on the string, the latter located in said opening.

3. A musical instrument consisting of a supporting structure for a string including an elastic part, a pair of spaced bridges mounted on said structure, a musical string extended across said bridges in contact therewith and connected at its ends to the structure, an elongated fret having a longitudinal tapered opening therethrough and slidably mounted on the string, the latter located in said opening, and damping material located in the enlarged end of said opening around the string.

4. A musical instrument consisting of a supporting structure for a string including an elastic part, a pair of spaced bridges on said structure, a musical string extended across said bridges in contact therewith and connected at its ends to the structure, and a fret having a longitudinal opening therethrough and slidably mounted on the string, the latter being located in said opening.

CHARLES H. MARX.