

L. C. SCHERMERHORN.
 STRING FOR MUSICAL INSTRUMENTS.
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Fig. 1.

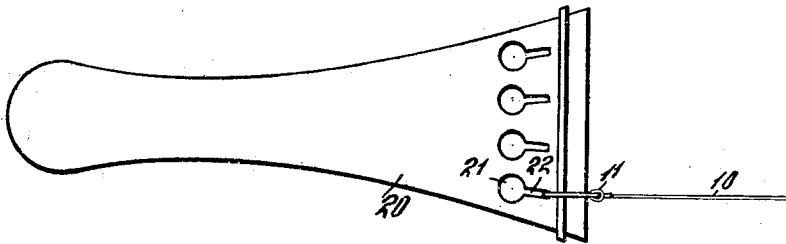


Fig. 2.

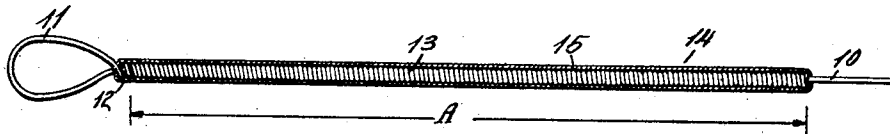
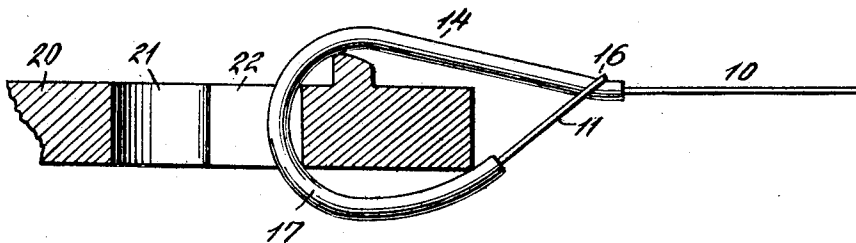


Fig. 3.



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STRING FOR MUSICAL INSTRUMENTS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LOUIS C. SCHERMERHORN, a citizen of the United States of America, and a resident of Paterson, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in Strings for Musical Instruments, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in musical instrument strings, and its object is to provide a metallic string such, for example, as is used as an E string of a violin, which shall be free from the objectionable features of such strings as have been heretofore available, and which shall have improved tone qualities.

In order that my invention may be thoroughly understood I will now proceed to describe the same in the following specification and then point out the novel features thereof in appended claims.

Referring to the drawings:

Figure 1 is a plan view of the tail piece of a violin with a string which is made according to and which embodies my invention connected therewith.

Fig. 2 is a plan view partly in section of one of my improved strings drawn on an enlarged scale.

Fig. 3 is an enlarged side elevation of one of my improved strings applied to the tail piece of a violin, a portion only of the tail piece being shown and that in section.

Like characters of reference designate corresponding parts in all the figures.

10 designates a wire of suitable metal for this use. 11 is a small loop formed by binding a portion of this wire back on itself and winding a few convolutions of the wire around the straight portion thereof. These convolutions and the straight wire are then soldered together as at 12 in order to make slipping of the connection impossible.

Beyond this connection the wire is wound tightly around the straight part of itself in a close spiral 13 to form a substantially cylindrical portion 14 of a desired length designated by the reference letter A. The soldered convolutions and the close spiral 13 are then covered by fibers of silk or the like as shown at 15.

In use the wire loop 11 is put through the opening 21 in the tail piece 20 and the silk covered cylindrical portion 14 is drawn into

the slot 22. Then the string 10 is passed through the wire loop 11 which is slipped back onto the cylindrical portion 14 as at 16 and the string tightened in place on the instrument by the usual means provided therefor. The silk covered cylindrical portion of the string now forms a loop 17 which I will call a string loop to distinguish it from the wire loop 11.

The size of wire suitable for strings of this character is so small that it cuts into the wood of which the tail piece is constructed. Such strings have been provided with loops of the size and form of loop 11 but when put under the tension required on the instrument have been subject to slipping and thus getting out of tune. The convolutions adjacent the loop and the contact of the loop with the wire itself, have also caused an undesirable buzz or rattle to be produced when the string is played upon. Moreover the contact of the small wire with the tail piece has caused the tone produced by the string to be harsh and metallic.

By means of my invention these undesirable features of metallic strings have been overcome so that the desirable features of strength and of clearness of tone are made available without attendant disadvantages.

In the first place the soldered connection 12 makes slipping of the wire loop impossible. Then only the enlarged cylindrical part 14 of the string comes in contact with the wood of the tail piece 20 so that the wood is not cut thereby. The contact of the wire loop 11 is also on the enlarged cylindrical part of the string so that chafing and wear at this point is minimized.

Even without the fiber covering the string is superior to those which have been available heretofore. The fiber covering adds to the qualifications of the string in that it further reduces any tendency to cut the tail piece or chafe at point of contact 16 and adds to the tone producing qualities of the string by completely eliminating any buzzing or rattling tendencies and any harsh or metallic qualities of the tone produced. It also enhances the appearance of the string.

I intend no limitations other than those imposed by the appended claims.

What I claim is:

1. A string for musical instruments constructed of a metallic wire, a part thereof being bent back upon itself to form a wire loop, and wound in a close spiral around a

sufficient length of the wire to form an enlarged substantially cylindrical portion of sufficient length to form a string loop through the tail piece of an instrument and to form a bearing for said wire loop.

2. A string for musical instruments constructed of a metallic wire, a part thereof being bent back upon itself to form a wire loop and wound in a close spiral around a sufficient length of the wire to form an enlarged substantially cylindrical portion of sufficient length to form a string loop through the tail piece of an instrument and to form a bearing for said wire loop, and a soldered connection at the base of the wire loop between a convolution of the wire and the part of the wire around which said convolution is wound.

3. A string for musical instruments constructed of a metallic wire, a part thereof being bent back upon itself to form a wire loop and wound in a close spiral around a sufficient length of the wire to form an enlarged substantially cylindrical portion of sufficient length to form a string loop through the tail piece of an instrument and to form a bearing for said wire loop, a soldered connection at the base of the wire loop between a convolution of the wire and the part of the wire around which said convolution is wound, and a fiber winding around said cylindrical portion forming a cover therefor.

In witness whereof, I have hereunto set my hand this 7 day of May, 1917.

LOUIS C. SCHERMERHORN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."