

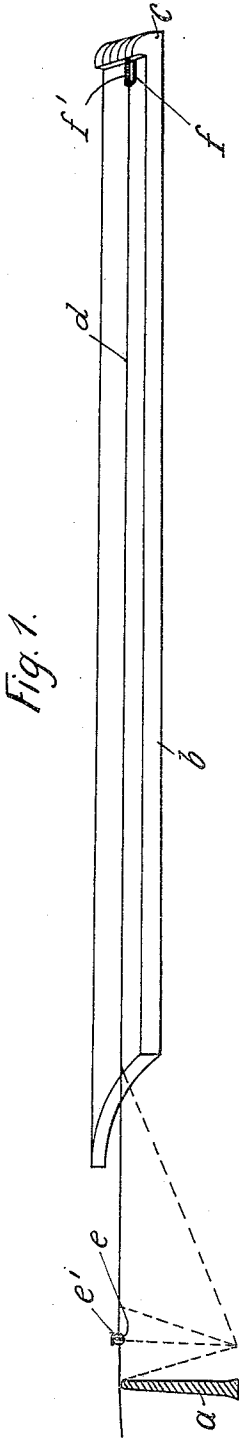
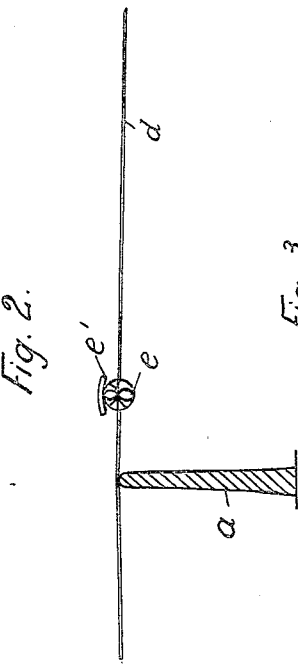
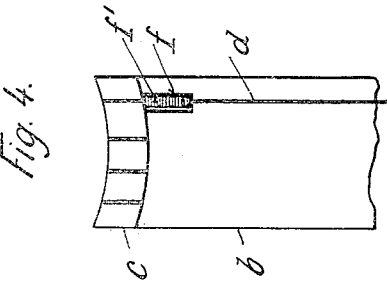
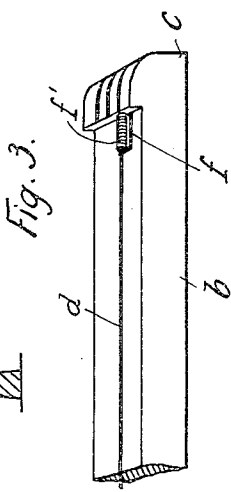
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O. LINDSTEDT

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DEVICE FOR IMPROVING THE TONE OF STEEL STRINGS

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Inventor:
O. Lindstedt
by: Markes & Clark
ATTY.

UNITED STATES PATENT OFFICE

OTTO LINDSTEDT, OF DRESDEN, GERMANY

DEVICE FOR IMPROVING THE TONE OF STEEL STRINGS

Application filed August 17, 1931, Serial No. 557,674, and in Germany July 9, 1929.

In order to improve the hard and shrill tone of steel strings it has already been proposed to arrange intermediate layers of resilient sound damping materials between the string and the bridge, or between the string and the saddle, or in both places. The improvements in tone obtainable by these means, especially with non-covered strings, are however unsatisfactory. It has already been proposed to arrange a rubber disc, or a small roll of rubber, slidably on the string between the bridge and the peg, but by this means an improvement of tone can be obtained only with thick non-covered strings and not with thin strings.

According to the invention an improvement of the tone of steel strings is obtained by arranging on the string between the bridge and the bowing place a little knot of silk thread which can slide and which is preferably made by means of a weaver's knot, and also, when using non-covered steel strings, by winding the string near to the saddle with a slidable winding of silk and a wire winding for protecting the silk and allowing this slidable winding to bear against an elastic support of rubber or the like, arranged between the string and the finger board. It is very advantageous to provide on the sliding knot of silk a little plate of leather, rubber, or the like, which is glued or otherwise fixed so as not to touch the string. The arrangement of the small plate has the object of increasing the action of the silk knot. The tone thereby becomes more definite and resembles that of a gut string.

The invention is illustrated in the accompanying drawings in which

Fig. 1 is a side elevation of the whole arrangement,

Fig. 2 shows a part of it on a larger scale,

Fig. 3 shows another part also on a larger scale and

Fig. 4 is a plan of the latter.

In these drawings *a* is the bridge, *b* the finger board and *c* the saddle of a stringed instrument. The string, the tone of which is to be improved, is indicated by *d*. The means intended for this purpose are in the first place a small knot *e* of silk carrying a piece of

leather, rubber or the like *e'*, and arranged slidably on the string between the bridge and the finger board, and secondly the double winding *f* of the string with silk and with wire for protecting silk which bears against an elastic support *f* of caoutchouc or the like, and is also slidable and is arranged close to the saddle *c*.

What I claim is:

1. In combination with a steel string of a musical instrument, a knot of silk arranged slidably on the string between the bridge and the point where the bow is applied and preferably made by means of a weaver's knot.

2. In combination with a non-covered steel string of a musical instrument, a knot of silk arranged slidably on the string between the bridge and the point where the bow is applied and preferably made by means of a weaver's knot, and a double winding on the string of silk and wire over the silk arranged slidably on the string, and an elastic support of caoutchouc or the like arranged above the finger board on which the double winding bears, as and for the purpose set forth.

3. A device as claimed in claim 1 having a small plate of resilient material arranged on the silk knot so as not to touch the string.

4. A device as claimed in claim 2 having a small plate of resilient material arranged on the silk knot so as not to touch the string.

5. A device as claimed in claim 1 having a small plate of caoutchouc arranged on the silk knot so as not to touch the string.

6. A device as claimed in claim 2 having a small plate of caoutchouc arranged on the silk knot so as not to touch the string.

7. A device as claimed in claim 1 having a small plate of leather arranged on the silk knot so as not to touch the string.

8. A device as claimed in claim 2 having a small plate of leather arranged on the silk knot so as not to touch the string.

In testimony whereof I affix my signature.

OTTO LINDSTEDT.