

(No Model.)

C. F. ALBERT.
STRING FOR MUSICAL INSTRUMENTS.

No. 443,809.

Patented Dec. 30, 1890.

Fig. 1.

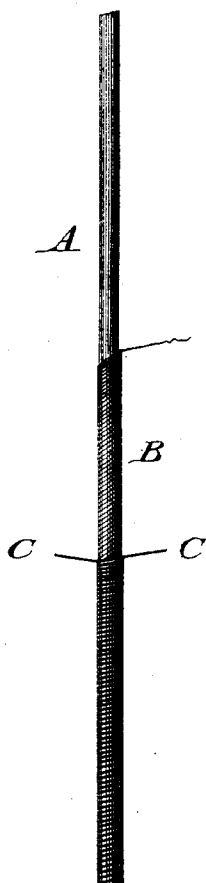


Fig. 2.

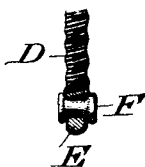
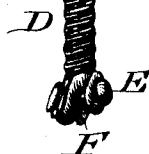


Fig. 3.



WITNESSES:

P. H. Kagle
E. Douville.

INVENTOR
Charles F. Albert
BY *John A. Diederich*

ATTORNEY.

UNITED STATES PATENT OFFICE.

CHARLES F. ALBERT, OF PHILADELPHIA, PENNSYLVANIA.

STRING FOR MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 443,809, dated December 30, 1890.

Application filed February 11, 1890. Serial No. 340,057. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. ALBERT, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Strings for Musical Stringed Instruments, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists in covering gut or other strings for a musical stringed instrument with floss or other silk or equivalent thread, whereby the same is protected against the injurious influence of electricity and from being cut by the wire, besides being prevented from becoming wire-loose or liable to rattle, and in covering said thread-wrapped string with two wires, whereby there is a more uniform tension of the wires, thus insuring a true and uniform vibration and an increase in the tone of the string.

It also consists in covering the string as wrapped and covered near the knot end thereof, whereby the wire is prevented from becoming loose, and rattling of the string on the tail-piece is prevented.

It also consists in providing the loop or knot of the string with a head or plug, whereby said loop or knot is prevented from contracting and slipping through the tail-piece.

Figure 1 represents an elevation of a piece of a string embodying my invention. Fig. 2 represents a partial elevation and partial longitudinal section of a portion thereof. Fig. 3 represents a partial elevation and partial longitudinal section at a right angle to Fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a string constituting the foundation of the string of a musical instrument, the same being formed of gut or other suitable material. On the string is wrapped, in a spiral or other direction, a covering B, of floss or other silk or equivalent thread of fibrous or textile material, after which two wires C are wound over the covering B, and the portion of the wires adjacent to the knot or looped end of the string is covered, as at D, with silk or other material. Within the loop or knot E of the string is placed a head or plug F as a filling, the ends of said head being flanged or shouldered,

thus preventing the slipping or displacement of the head from the loop or knot.

It will be seen that owing to the covering B the foundation string A is protected against the injurious influence of electricity and prevented from being cut by the wire when said string swells, as the covering is soft and pliable and yields when subjected to the pressure of the wire. Again, when the wire expands, it is prevented from vibrating against the string A and rattling or becoming loose, as the silk or covering yields and compensates for the sufficient space of the expansion of the wire, as the covering is soft and unchangeable in all climates. Said covering also permits a higher tension of the wire when applied over the silk or covering and gut, and when so covered makes a more pliable string and one not so stiff and wiry as in the old method.

The wires C may be of different kind, grade, or quality, and by the use of two such wires I am enabled to verify the quality of tone to suit the different kinds of instruments, or as found best for the purpose intended, and as the strings may be put on or feed from right to left or in opposite sides the string A is kept parallel, thus permitting a more uniform tension of the wire, and in this way obtaining a more uniform and true vibration and a consequent increase in the tone.

In the manufacture of strings as heretofore practiced a single wire draws the string A sidewise or out of the center. Consequently it will be constantly on a bend during the operation of applying the wire, while there is a liability of the string to be untrue and irregular in vibration.

The complete string will be found to vibrate freely with increase of tone, responds quickly to the touch of the bow, speaks more freely in the upper positions, and is not liable to become wire-loose.

The covering or wrapping D prevents the wire from drawing loose and keeps it from rattling on the tail-piece. The head or plug F in the loop or knot E prevents the latter from contracting and slipping through the tail-piece.

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

1. A string for a violin and other similar

instrument, consisting of a gut foundation, string or core having a wrapping of silk thread, and metallic wires wound around said silk wrapping, substantially as described.

5 2. A string for a violin and other similar instrument, consisting of a gut foundation, string or core A, having a wrapping B of silk thread, two metallic wires C wound around said silk wrapping, and a securing-wrapping
10 D on said wires, substantially as described.

3. A string for a musical instrument, hav-

ing a head or plug in the loop or knot of the string, substantially as described.

4. The head or plug F in the loop or knot of a musical-instrument string, formed with 15 shoulders, and flanges on the ends thereof, substantially as described.

CHARLES F. ALBERT.

Witnesses:

JOHN A. WIEDERSHEIM,

A. P. JENNINGS.