

(No Model.)

L. A. SUBERS.
WIRE STRING FOR MUSICAL INSTRUMENTS.

No. 467,061.

Patented Jan. 12, 1892.

FIG. 1



FIG. 2.



Witnesses:

Alex. Barkoff
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Inventor:

Lawrence A. Subers
by his Attorneys
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UNITED STATES PATENT OFFICE.

LAWRENCE A. SUBERS, OF PHOEBUS, VIRGINIA, ASSIGNOR OF ONE-HALF TO
SAMUEL B. COUGHLIN, OF PHILADELPHIA, PENNSYLVANIA.

WIRE STRING FOR MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 467,061, dated January 12, 1892.

Application filed June 2, 1891. Serial No. 394,841. (No model.)

To all whom it may concern:

Be it known that I, LAWRENCE A. SUBERS, a citizen of the United States, and a resident of Phoebus, Elizabeth City county, Virginia, have invented an Improved Wire String for Musical Instruments, of which the following is a specification.

The object of my invention is to provide a wire string for a piano or other stringed musical instrument which will possess greater tensile strength and will give a better tone than the wire strings now employed; and this object I attain by making the string of a series of strands twisted together, each strand of the twisted string being of less size than the single-wire string which said twisted string is intended to replace, so that by preference the aggregate cross-sectional area of the whole number of strands in the twisted string will approximate the cross-sectional area of the said single string.

In the accompanying drawings, Figure 1 is a side view, on an enlarged scale, of a piece of my improved wire string intended for a piano; and Fig. 2 is an enlarged transverse section of the same.

Ordinary wire strings for pianos and other stringed instruments consist of a single strand of wire for the medium and high notes and of a wire core with a wrapping of wire for the bass notes. The wires, especially those for the higher notes of the scale, are necessarily very light and possess but little tensile strength, so that to produce the desired note they must be short and lacking in depth of tone, whereas if the wire possessed greater tensile strength it could

be stretched tighter, so that greater length would be permissible and a better tone could be produced. The wrapping of the bass strings, moreover, does not increase their tensile strength, which is only that of the wire core. I find that by making each string of a number of strands twisted together, each strand being much finer than the single-wire string which the twisted string is intended to replace, I am enabled to produce a string of substantially the same weight or cross-sectional area as the single-wire string, but possessing materially greater tensile strength and a material improvement in tone. I prefer to make each string of three strands, although it may consist of but two strands, if desired; or more than three strands may be used, so long as they are so disposed in twisting that in a given length of string each of the strands will be of exactly the same length, so that in stretching the string the strain will be exerted simultaneously upon all of the strands.

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

The within-described wire string for musical instruments, said string consisting of a series of strands twisted together, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LAWRENCE A. SUBERS.

Witnesses:

EUGENE ELTERICH,
HARRY SMITH.