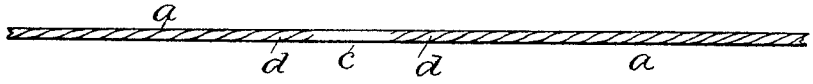
(No Model.)

T. GILL.

PIANO STRING.

No. 478,746. Patented July 12, 1892.

Fig. 1.



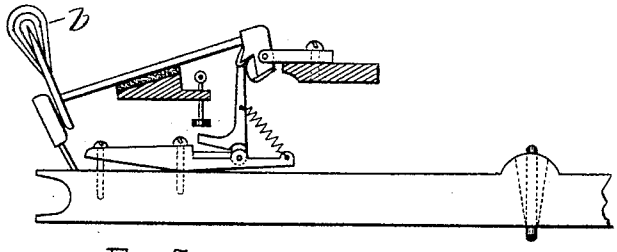


Fig. 2.

Fig. 3.

Fig. 4

Witnesses.

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UNITED STATES PATENT OFFICE.

THOMAS GILL, OF WALTHAM, MASSACHUSETTS.

PIANO-STRING.

SPECIFICATION forming part of Letters Patent No. 478,746, dated July 12, 1892.

Application filed March 25, 1892. Serial No. 426,411. (No model.)

To all whom it may concern:

Be it known that I, THOMAS GILL, of Waltham, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Piano-Strings, of which the following is a specification.

My invention has relation to strings for piano-fortes and other musical instruments by the vibrations of which the musical sounds are produced.

It is the object of my invention to provide such improvements in strings of the kind mentioned as will enhance the timbre or quality of the tone.

It is also the object of my invention to produce improvements which will obviate the rapid wear or cutting of the hammer by cumulative blows upon the strings.

To these ends my invention consists of a piano-forte string or strings for other musical instruments provided with a flat face at the point where the hammer acts thereon, and having the portions therebeyond twisted, all as is hereinafter more fully described, and then particularly pointed out in the claims.

Reference is to be had to the annexed drawings and the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 is a side view of a piano-forte string embodying my improvements and showing also a hammer and immediately-associated parts of the "action." Figs. 2, 3, and 4 are diagrams in cross-section at the line x x, Fig. 1, showing the forms of wire which may be employed in carrying out my invention.

In the use of such musical instruments as piano-fortes the repeated blows of the hammer against the strings results in the rapid cutting or wearing of the hammer, so as to soon impair its perfect action and ultimately destroy its efficiency. I have discovered that by flattening the wire at the point where the hammer strikes thereagainst the difficulty mentioned is substantially overcome. I have also discovered that if a wire triangular, rectangular, or having other angular form in cross-section is used, in order to present a flat face to the hammer, and is twisted in those portions beyond where the hammer acts thereagainst the timbre or quality of the tone of the string is improved in a very appreciable degree.

In the drawings, referring to Fig. 1, a designates a piano-forte string, and b is the hammer of a piano-action, it being unnecessary to particularly describe the latter, since it is is in no way involved in my invention. The string a may be of triangular form, as shown in cross-section, as is represented in Fig. 2, or it may be rectangular or half-round in shape in cross-section, as shown, respectively, in Figs. 3 and 4, or it may be a round wire-wrapped string, as is commonly used, the essential feature of the invention being that the string is provided with a flat face c at the point where the hammer b acts thereagainst and is twisted in the portions d therebeyond.

Instead of twisting the end of the string a around the tuning-pin, as is now commonly done, in order to fasten it and effect its tuning, I fasten it to any suitable adjustable clamp, hook, or other device by which the approximate tension for tuning can be accomplished and provide suitable finely-adjustable means for acting upon the string intermediate of its fastening-point and next adjacent support, whereby the stress upon the said string may be adjusted with the utmost nicety, and the tuning thereof effected accordingly.

Having thus explained the nature of my invention and described a way of constructing and using the same, I declare that what I claim is—

1. A string for musical instruments, provided with a flat face at the point where the hammer acts thereagainst and having the portions therebeyond twisted, as described.

2. A string for musical instruments of angular form in cross-section, provided with a flat face at the point where the hammer acts thereagainst and having the portions therebeyond twisted, as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 12th day of March, A. D. 1892.

THOMAS GILL.

Witnesses:
ARTHUR W. CROSSLEY,
WILLARD H. GILMAN.