

(No Model.)

H. MÜLLER.
TUNING PIN.

No. 602,514.

Patented Apr. 19, 1898.

FIG. 1

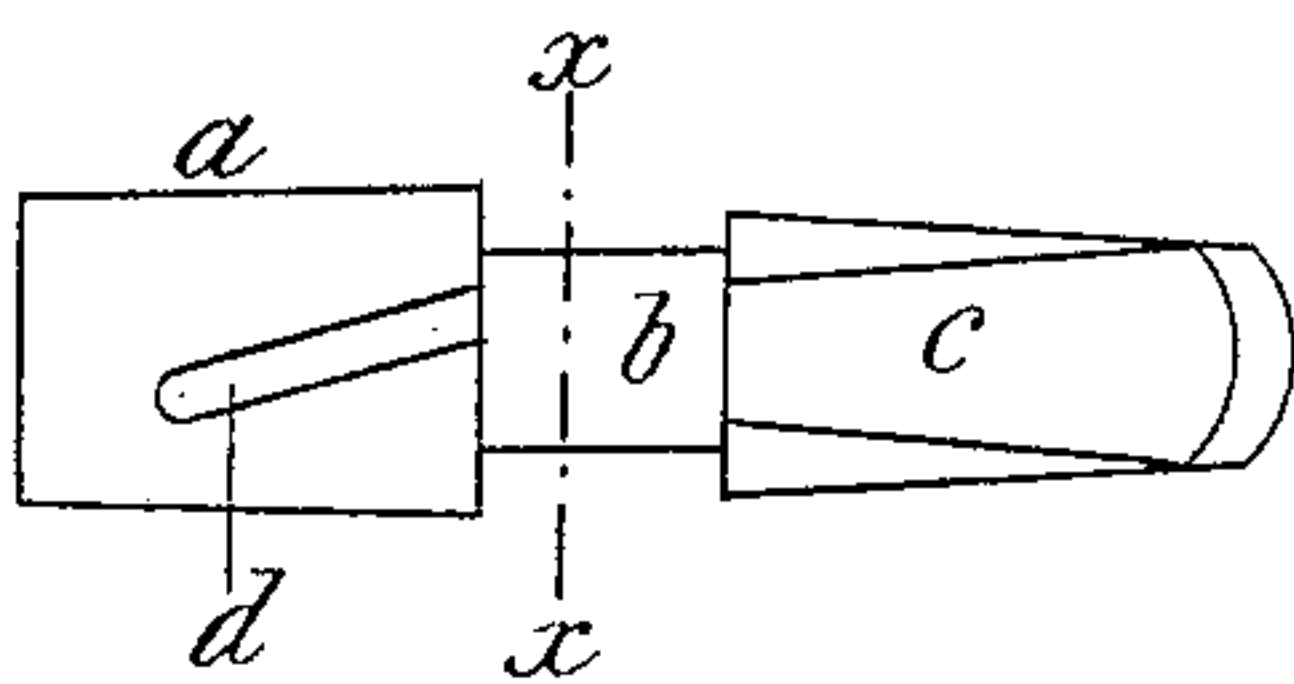
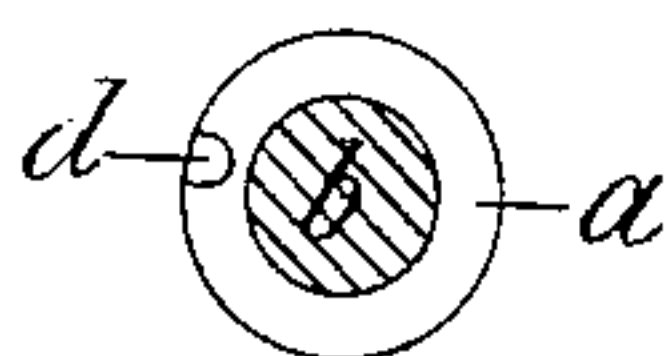


FIG. 2



Witnesses:
John Buckler,
L. M. Müller

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UNITED STATES PATENT OFFICE.

HENRY MÜLLER, OF LONDON, ENGLAND.

TUNING-PIN.

SPECIFICATION forming part of Letters Patent No. 602,514, dated April 19, 1898.

Application filed July 21, 1897. Serial No. 645,367. (No model.) Patented in England May 6, 1897, No. 11,323.

To all whom it may concern:

Be it known that I, HENRY MÜLLER, musical-instrument maker, a subject of the Queen of Great Britain, residing at 20 Crawford street, Camberwell, London, S. E., England, have invented Improvements in Tuning-Pins and the Like, (for which I have obtained a patent in Great Britain, No. 11,323, bearing date May 6, 1897,) of which the following is a specification.

The object of my invention is to effect improvements in the construction of tuning-pins and the like for musical stringed instruments, and in order that my said invention may be particularly described and ascertained reference is hereby made to the accompanying drawings, in which similar letters of reference indicate corresponding parts.

Figure 1 is a longitudinal diagram of my improved tuning-pin as constructed for pianofortes, harps, and the like; and Fig. 2 is a section on the line *xx* of Fig. 1.

According to my invention I form the pin of three diameters, the largest portion *a* being the conical end which enters the wrest-plank. The central portion *b* is of the smallest diameter, and the outer portion *c* for receiving the key is squared and tapered and somewhat stouter than the central portion.

d is a diagonally-cut groove formed in the largest conical end of the pin, no hole being made through the pin for receiving the end of the wire or string.

The wire or string is secured to the pin by inserting the end in the groove *d* after placing the pin in the hole in the wrest-plank. The wire is then turned around the neck *b* several times, whereby it is rendered secure.

In applying my invention to the construction of pins for violins and other musical instruments of a like nature the outer end *c* of the pin is modified in form to suit such instruments, being constructed with heads for turning by hand or with worm-wheels and worms or other well-known appliances.

By means of my invention the usual hole through the pin is dispensed with, and the pin retains the full strength of the metal or other material of which it may be constructed.

I claim—

A tuning-pin constructed with an angular head for turning the same, an intermediate cylindrical portion and a conical end portion of larger diameter than said intermediate portion and provided upon the side thereof with a groove, said groove extending diagonally a short distance toward the ends of said conical end portion, substantially as described.

Dated this 17th day of May, 1897.

HENRY MÜLLER.

Witnesses:

A. C. DOWNING,
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