

(No Model.)

J. W. CARNES.

TUNING PIN FOR PIANOS.

No. 352,395.

Patented Nov. 9, 1886.

Fig. 1.

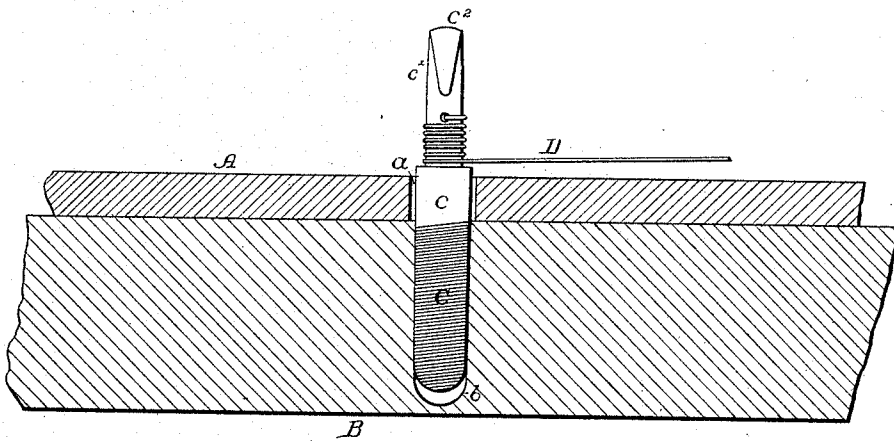
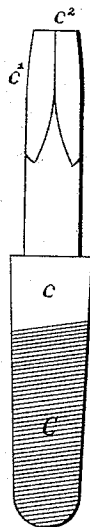


Fig. 2.



Witnesses

T. G. Fischers
Theo. J. Fischer

Inventor

John W. Carnes
By his Attorney L. Deane

UNITED STATES PATENT OFFICE.

JOHN W. CARNES, OF ORION, ILLINOIS.

TUNING-PIN FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 352,395, dated November 9, 1886.

Application filed December 29, 1883. Serial No. 115,918. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. CARNES, a citizen of the United States, residing at Orion, in the county of Henry and State of Illinois, have invented certain new and useful Improvements in Tuning-Pins for Pianos and other Musical Instruments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification, in which —

Figure 1 is a view of one side of my improved piano tuning-pin applied to a frame and block in section. Fig. 2 is a side view of the pin as it appears when two of its beveled sides are seen at the same time.

The present invention relates to an improvement in the tuning-pin of a piano or other stringed instrument; and it consists in such novel details of construction as will enable the pin when adjusted in position by the tuner to preserve the proper tension of the strings, all as will be more fully set out and explained.

In the accompanying drawings, A represents the iron frame of a piano; B, the tuning-block; C, the tuning-pin. This tuning-pin first passes through the hole *a* in the iron frame A, which hole *a* is of greater diameter than the larger portion *c* of the tuning-pin C, so that said pin may not come in contact with the iron frame A. Thence the largest tapered part *c* of the tuning-pin C is driven into a suitable hole, *b*, in the wrest or tuning block B, made for the reception of the tuning-pin, and of such size as to firmly hold the tuning-pin when it is adjusted therein by the tuner. The shank or upper end, *e*, of the tuning-pin, around which the wire or string D is wound, and to which the key is applied in the process of tuning, is of much less diameter than the lower portion, *c*, but yet is of the proper size and diameter for the reception of the tuning-instrument, and has the essential provisions, as now indicated at *e*, for the attachment of a wire or string. The lower portion or body C of the pin is milled or knurled. The milling of the pin is essential in drawing the pin downward or into the socket more firmly while in the

process of tuning, and retaining the pin well down in its socket, as the tendency of the string is to draw out or upward to the agraffe, over which the string passes.

As thus made and applied, the pin is used in the ordinary manner. It will be perceived that the peculiar structure of the pin allows a very large proportional part of the pin to be inserted in the tuning-block, and this part, being of much larger diameter than ordinary, affords a much larger surface than usual for the tuning-block to act upon. Not only is this very important advantage secured by means of this invention, but by reason of the small relative diameter of the shank on which the wire or string D is wound it is evident that the strain brought by the wire or string D on said shank will be very effectually resisted by the larger body of the pin in the tuning-block. Thus there is an exceedingly small chance for loss of tension on the wire or string by reason of any accidental turning of the pin. Therefore, when the string or wire has been properly adjusted in tune, it is certain to be retained and sustained in the desired position.

I am aware that a peg for a guitar or "guitar-peg" (never known as a tuning pin or key) has been constructed with a cylindrical shoulder portion, a flattened handle for turning the peg, and a reduced cylindrical winding-stem.

I am also aware that a piano tuning-key has been constructed with a tapered body having a smooth surface, and the portion for string-winding reduced in circumference without reducing the "original" pin at the end to which the tuning-hammer is attached, or enlarging the body or "end" to be inserted in the wrest-plank, being constructed simply by turning out a small portion of a common tuning-pin for the string-winding part, all of which has proven itself to be impractical, first, because of the weakness of the string-winding part, by being reduced in circumference from the body of the pin, (already too small in circumference;) and, secondly, by having the weak part further weakened by the hole through which the string passes, rendering it too weak to resist the weight of the string, and the necessary pressure or "friction" of the tuning-block without breaking in the process of tuning. These features I broadly disclaim.

It will be observed that the lower enlarged portion of the pin is tapering, and that the upper portion is constructed with the cylindrical shank and the tenon *c'*, as shown and
5 above described, for the purposes of entering the key-sockets of different size.

The pin is as cheap and easily used as any tuning-pin now known, if, indeed, in these respects it is not superior. It is adapted for the
10 ordinary key.

I do not claim a tuning-pin having an enlarged cylindrical shank or lower portion and a reduced upper portion.

The upper part of the pin is beveled on four
15 sides to enter the square socket of a tuning-hammer. The view, Fig. 1 of the drawings, would necessarily show said square portion tapering; but that portion of the stem on which the string is wound is cylindrical.

Having now described my invention, what I 20 consider new, and desire to secure by Letters Patent, is—

A tuning-pin for pianos having one end fitted, as usual, to receive the tuning-hammer, a cylindrical shank for the string-winding part 25 of the same diameter as the end to which the tuning-hammer is attached, and an enlarged tapering and milled body, substantially as described.

In testimony whereof I affix my signature in 30 presence of two witnesses.

J. W. CARNES.

Witnesses:

LEVI HIGGINS,
W. M. SMITH.