

(No Model.)

C. S. WEBER.
STRINGING PIANOS.

No. 482,512.

Patented Sept. 13, 1892.

Fig. 1.

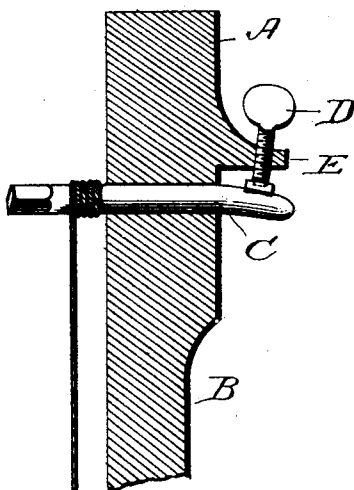


Fig. 2.

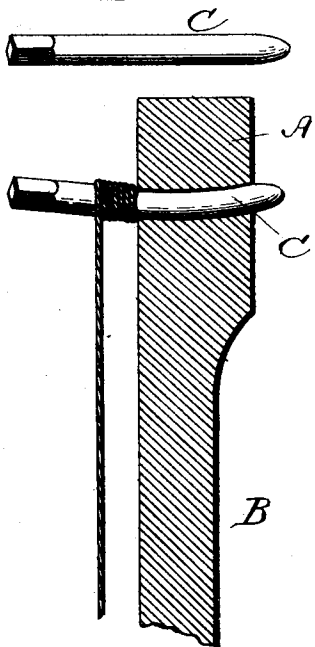
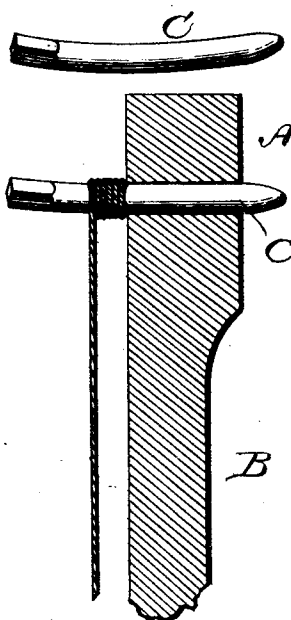


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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STRINGING PIANOS.

SPECIFICATION forming part of Letters Patent No. 482,512, dated September 13, 1892.

Application filed February 2, 1892. Serial No. 420,113. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. WEBER, a citizen of the United States, residing at San José, county of Santa Clara, State of California, have invented a new and useful Improvement in Stringing Pianos; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a detail view showing the application of the invention, the pin being deflected by means of a binding-screw. Fig. 2 is a detail view of a modification, showing a straight pin deflected by means of a curved hole in the plate. Fig. 3 is a detail view of a further modification, showing a curved pin deflected by means of a straight hole in the plate.

The object of my invention is to increase the tone-keeping quality in pianos by substituting iron or other suitable metal for the wood used in keeping the tuning-pins in position.

In this improved construction the pin-holes in the proper metal plate are drilled to a diameter fully as large as that of the pin. To steady this latter, I have recourse to the elastic force with which the pin tends to resume its original form when bent within the limits of its elasticity. The bend in the pin is produced either by means of the "friction-regulator" or by means of a "curved pin-hole."

The first device consists merely of a screw so placed as to press against the round end of the pin, which for this purpose is left to project from the plate containing the pin-holes. By augmenting the pressure of the screw the pin is bent and a section of it forced to act as a spring, which presses constantly against the inner surface of the pin-hole. This pressure causes in the pin a certain degree of resistance against being turned around. The proper degree can be easily obtained by means of a few turns of the screw. This latter moves in a threaded hole drilled in a projecting piece of metal well secured to the plate above mentioned. To prevent the pin slipping over the end of the screw, an intermediary piece is placed between the two, grooved to fit to the pin on one side and on the other to receive the point of the screw.

The second device produces the same result in a far simpler way and admits a considerable reduction in the cost of a piano, as by simply thickening that part of the plate which in the modern construction usually shields the wrest-plank and by boring the pin-holes with the proper curve in that reinforced plate the entire cost of the wrest-plank is saved. A greater advantage than that in cost results from the circumstance that pins thus secured will not be loosened, even if subjected to the driest air-currents. They will also resist a far longer wear and more careless handling than those secured in wood. Another version of this second device is to force bent pins into a straight pin-hole. While it is possible to use this method successfully, the former is preferable.

In conclusion it may be stated that in high-priced instruments, where the additional cost of the friction-screw would not be a consideration, this device might be combined with the second and used for taking up the wear which in time might result from often-repeated tuning, especially at the end points (openings) of the curved hole on the convex side of the pin.

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

1. In a stringed musical instrument, the combination, with a metal plate having a pin-hole, of a tuning-pin inserted in the said pin-hole and bent from a normal position to create a frictional binding of the said pin in the pin-hole, substantially as set forth.

2. In a stringed musical instrument, the combination, with a metal plate having a pin-opening and a tuning-pin inserted in the said opening, of a set-screw constructed to bear laterally on the said tuning-pin to bend the same from a normal position, substantially as and for the purpose described.

3. In a stringed musical instrument, the combination, with a metal plate having a pin-opening and a tuning-pin inserted in the said opening, of a set-screw constructed to bear laterally on the said tuning-pin and a shoe interposed between the said set-screw and the tuning-pin, substantially as specified.

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Attest:

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