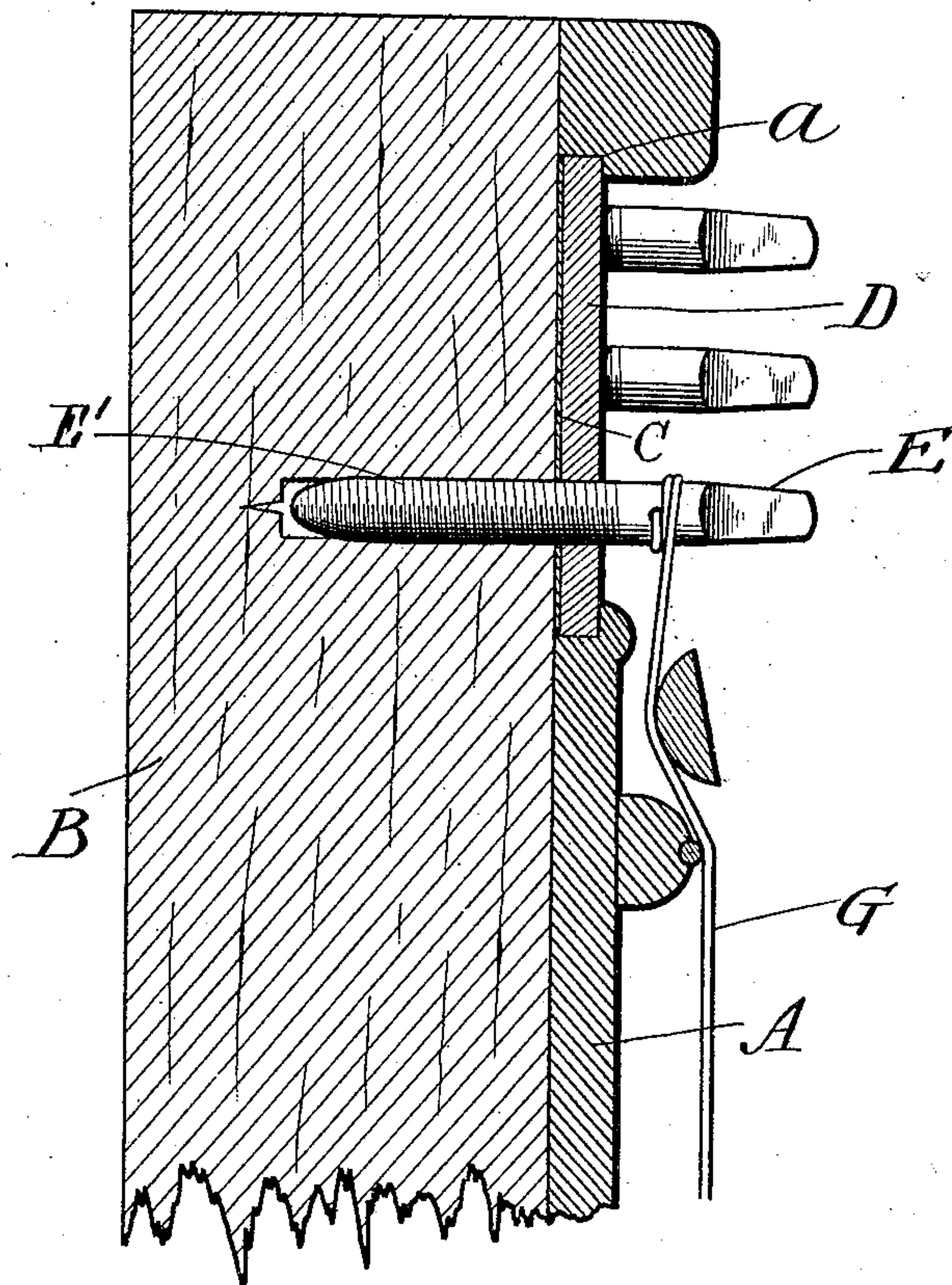


No. 835,129.

PATENTED NOV. 6, 1906.

R. CABLE, JR.
WREST PLANK FOR PIANOS.
APPLICATION FILED MAY 22, 1905.



WITNESSES:

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ROBERT CABLE, JR., OF NEW YORK, N. Y.

WREST-PLANK FOR PIANOS.

No. 835,129.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed May 22, 1905. Serial No. 261,502.

To all whom it may concern:

Be it known that I, ROBERT CABLE, Jr., a citizen of the United States, residing in the borough of Manhattan, in the city and State of New York, have invented a certain new and useful Improvement in Wrest-Planks for Pianos, of which the following is a specification.

My improved wrest-plank is supported in the same manner as the ordinary wrest-plank in ordinary use and may be of the same material and in all respects similar, except that it is a little thinner than the ordinary and that the thickness of a portion is increased by a peculiarly-adapted plate of metal.

There have been many previous improvements in the same general line—the fortifying of the wrest-plank against the strong pull due to the wires. My improvement has marked advantages over any before known to me.

I have discovered that it is practicable with the ordinary fine screw-threaded tuning-pins to employ a facing of metal of medium softness bored with holes of the same diameter or a trifle larger than the tuning-pins, so that when the pin is inserted by driving endwise it finds its ordinary firm and reliable bearing in the wood, while the metal threads are nearly or quite in contact with the pin.

When the strings are applied and the pins yield ever so little by the softness of the wood, the pins commence to bear forcibly against the metal, which latter should be sufficiently hard and thick to hold the pin against being appreciably deflected and so soft that it cannot injure the threads of the tuning-pin, but will be slightly cut by the threads of the latter, making corresponding internal threads as the pin is turned. It makes itself a fair and firm bearing. I have in my experiments used aluminium about one-eighth of an inch thick for these metallic plates. I hold the metal plate against the strain received through the pins and wires by allowing the edge of the metal to lie fairly in contact with the rabbet in the adjacent iron frame. The metal plate and the wood portion of the wrest-plank are also secured together by a strong cement C, extending over the whole or the principal portion of the surfaces in contact.

The following is a description of what I

consider the best means of carrying out the invention.

The accompanying drawing forms a part of this specification. It is a vertical section.

Referring to the drawing and letters of reference marked thereon, A is a portion of the ordinary cast-iron frame; B, the wrest-plank; D, my facing of aluminium secured to the wood by a coat of strong cement C; E, a tuning-pin having the usual fine screw thread E', and G is the string. Each pin is equipped for being turned in the ordinary manner by a key, (not shown,) and each serves in all respects as usual, except that the pin is peculiarly supported by the threaded metal with more than usual firmness. A rabbet *a* is formed in the top edge of the frame A, in which the edge of the metal plate D is received and supported.

In preparing the plate and the wood I bore the holes in the required positions in the plate, each of the same diameter or a little larger than the pins which are to be inserted. I bore the wood portion of the plank with a tool so much smaller that it will allow the wood to take a very firm hold on the pin when the latter is forced in and will hold it firmly in any position into which it is turned. The lateral force when the strings are tightened effects or increases the contact on one side, and in the turning motion in the act of tuning the screw-thread E' cuts away a little of the metal, making an internal screw-thread, and leaves the wood and the metal parts bearing exactly fair. My improved wrest-plank will last indefinitely and will endure any climate.

I attach importance to the gluing or cementing to the wood, because I ascribe to it in part the absence of the metallic tone, which is one objection to some plans for supporting the tuning-pins by metal.

Modifications may be made without departing from the principle or sacrificing the advantages of the invention. Parts can be used without the whole. I can use other metal than aluminium; but it is important to have a metal sufficiently soft to be slightly cut out by the threaded pin when it is turned in one direction and the other in setting the strings or subsequently tuning them and yet sufficiently hard and strong to effectually resist the strong pull to which the pins are subjected.

I claim as my invention—

1. In a piano, in combination with a wrest-plank and threaded tuning-pins, of a metallic plate having tuning-pin openings registering
5 with corresponding openings in the wrest-plank, the openings in the plate being normally of slightly-greater diameter than the diameter of the pins and said plate being of
10 metal softer than the tuning-pins so that the pins may cut threads in the openings of the plate without injuring the threads of the pins, substantially as described.

2. In a piano, the combination with a wrest-plank and threaded tuning-pins, of a metal

facing-plate having tuning-pin openings 15 registering with corresponding openings in the wrest-plank, the facing-plate being of softer metal than the tuning-pins, and a layer of cement interposed between the metal facing and wrest-plank, substantially as de- 20 scribed.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

ROBERT CABLE, JR.

Witnesses:

JOHN WISZNER,

THOMAS CABLE.