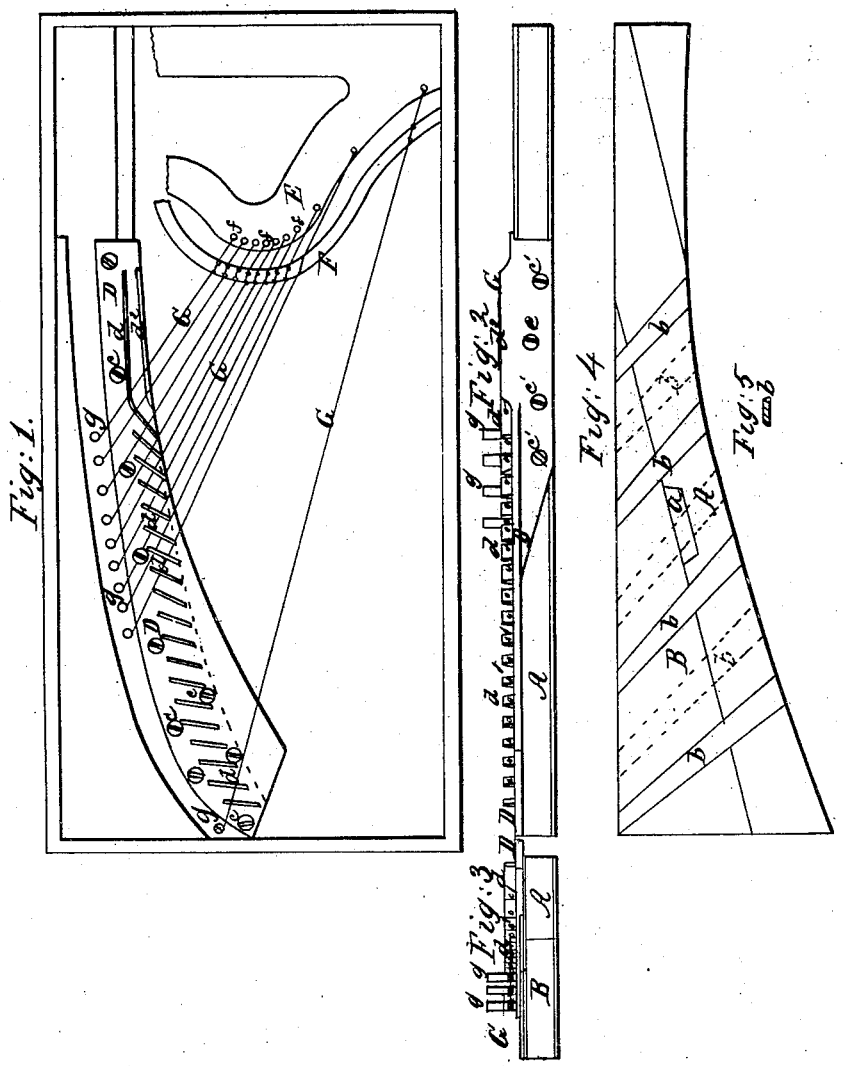
J. Ruck,

Piano,

No. 7,308, Patented Apr. 23, 1850.



UNITED STATES PATENT OFFICE.

JOHN RUCK, OF NEW YORK, N. Y.

PIANOFORTE.

Specification of Letters Patent No. 7,308, dated April 23, 1850.

To all whom it may concern:

Be it known that I, JOHN RUCK, of the city, county, and State of New York, have invented certain new and useful Improvements in the Construction of Pianofortes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, represents a plan of part of the interior of a square piano-forte showing the tuning block. Fig. 2 is a front view of the tuning block. Fig. 3 is an end view of the same. Fig. 4 represents the tuning block before it is veneered. Fig. 5 is a section of one of the dovetailed bolts or keys used in strengthening the tuning block.

Similar letters have reference to corresponding parts in the several figures.

My invention consists in constructing the tuning blocks of piano-fortes by combining wood and metal in such a manner as to give great firmness and strength and render them capable of bearing the great strain of the strings without yielding or losing their shape; and in providing rests or bearings for the strings which will prevent any shaking or jarring.

I construct the tuning blocks of a number of pieces of wood, so arranged and united as to prevent the liability to warp, and I attach a plate of metal to its upper surface having a series of ribs attached to and forming part of the plate, these ribs form the bearings for the strings which rest each on the upper side of one of the ribs and pass through a hole in the rib next to it previous to being wound on the tuning pins.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction.

A, see Figs. 2, 3, and 4, is a slab of any suitable wood in the back edge of which a recess is cut of the form indicated by *a*, in Fig. 4. The slab is bent to the curved form seen in the front edge, this is effected by placing a rest on the front side opposite the recess, and applying force at the back side near the ends; a wedge or piece of hard wood *a*, is fitted into the recess and firmly secured by gluing; the back edge is then planed off straight and a piece B, is glued on. Diagonal grooves of dovetail form are then cut across the pieces A, and B, on their upper and lower sides and the bolts or keys *b*, *b*, *b*, are fitted in and secured with glue; each side is then planed off and veneered. The grain of the wood in the slab A, running in the form of an arch it will bear a much greater strain than if formed of a straight single slab as in common tuning blocks.

D, is a plate of metal having a series of ribs *d*, *d*, *d*, cast on its upper side, each rib is provided with one or more holes 1, which are bored in a direction parallel to the surface of the plate, excepting only the front rib d^2, which requires no holes, the plate D, is secured to the tuning block by screws *c*, *c*, *c*, and is provided with a lap *e*, projecting over the edge of the tuning block and secured by screws *c'*, *c'*, *c'*.

E, is the metallic plate and F, is the bridge, which are constructed and attached in the usual manner.

G, G, G, are the strings which are secured at one end to pins *f*, *f*, *f*, on the metallic plate E, the other ends of the strings are carried over the ribs *d*, *d*, *d*, and passed through the holes 1, 1, 1, in the ribs immediately behind those they pass over, and are then attached to the tuning pins *g*, *g*, *g*, which are fitted in the tuning block in the usual manner. The strings G, G, G, have a downward bearing on the upper edges of the ribs *d*, *d*, *d*, and an upward bearing on the upper side of the holes 1, 1, 1, by which means they bear firmly on the tuning block and will produce a full, round, clear tone.

The above described arrangement of the tuning block is suitable for a square pianoforte and is secured in the instrument in the usual manner. The plate D, might be cast in one piece with the metallic plate E, or may be cast separately as shown and described.

I claim—

1. The manner of constructing the tuning block substantially as herein described, of the arched slab A, and the back piece B, with the wedge or piece *a*, and the diagonal bolts or keys *b*, *b*, *b*, whereby it is made capable of withstanding the great strain of the strings.

2. And I also claim the metal plate D,

carrying the ribs *d*, *d*, *d*, projecting from and forming part of it, the plate being attached to the upper surface of the tuning block, each of the strings of the instrument passing over and resting on a rib, and passing through a hole in the rib immediately behind, whereby the strings obtain a solid bearing on the tuning block, which will make them produce a full, round, clear tone.

JOHN RUCK.

Witnesses:
O. D. MUNN,
EL POLHAMUS.