

UNITED STATES PATENT OFFICE.

EDWARD STROUD, OF NEW YORK, N. Y.

SOUNDING-BOARD FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 487,060, dated November 29, 1892.

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To all whom it may concern:

Be it known that I, EDWARD STROUD, of New York, in the county and State of New York, have invented a new and useful Improvement in Sounding-Boards of Pianos, of which the following is a specification.

My invention relates to an improvement in the sounding-boards of pianos and other musical instruments with the object in view of rendering them capable of resisting the pressure of the strings without making the boards so thick or heavily reinforced as to impair their best acoustic properties.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a section taken through the sounding-board of the piano at that portion of the scale where it is overstrung. Fig. 2 is a similar view showing a truss-wire in connection with the ends of two reinforcing-ribs, and Fig. 3 is a sectional view through that portion of the scale where it is not overstrung.

The wrest plank or pin block in which the tuning-pins are set is denoted by A, the tuning-pins by B, the iron plate in which the hitch-pins are set by C, the hitch-pins by D, the treble-strings by E, and the bass-strings by E'. The bridge over which the treble-strings are drawn is denoted by e, and the bass-bridge, over which the bass-strings are drawn, is denoted by e'.

The body of the sounding-board is represented by F. It may be of any well-known or approved construction. My present invention contemplates the stiffening and strengthening of the board F by the employment of truss-wires G, secured at their opposite ends at or near the edges of the sounding-board, or they might be secured at any desired points intermediate of the edges of the board. Intermediate of their fastened ends the truss-wires G pass over rests or struts H, which I find it desirable to locate opposite the bridges ee'. The rests H may be made adjustable toward and away from the side of the sounding-board, and in the present instance I have shown them as having their shanks screw-threaded and adapted to enter the screw-threaded sockets in nuts h, which bear against

the board, so that by turning the nuts the rests H will be forced outwardly away from the board to tighten the bass-wires or permitted to approach the board to loosen them.

To provide a firm anchorage for the ends of the truss-wires, I place reinforcing disks or pieces I, of wood or other suitable material, upon one or both sides of the sounding-board.

In the arrangement shown in Fig. 1 I utilize the rest or strut of one of the truss-wires as an anchorage for one end of another truss-wire, the other end of the truss-wire being anchored to the sounding-board, where it is reinforced by pieces I on both sides.

In Fig. 2 I have shown the pieces I upon one side only, the reinforcing-ribs f upon the opposite side being utilized in connection with the pieces I to effect a secure anchorage.

In the form shown in Fig. 3 the opposite ends of the truss-wires are each anchored to the sounding-board, the latter being provided with the reinforcing-pieces I upon both sides.

In order to prevent undesirable vibrations of the truss-wires, I connect them by damper-threads K with eyes k, screwed into the sounding-board. The damper-threads may be made of silk.

The above-described construction and arrangement of parts serves to support a sounding-board of desirable thinness and softness so firmly as to effectually prevent it from springing and warping to any injurious extent, and the invention may be readily applied to sounding-boards already in use to return them to position or prevent them from getting out of position.

What I claim is—

1. The combination, with the sounding-board of a musical instrument, of one or more truss-wires secured thereto, substantially as set forth.

2. The combination, with the sounding-board of a musical instrument, of one or more truss-wires having their ends anchored to the sounding-board and adjustable rests or struts inserted between the wire and the board, substantially as set forth.

3. The combination, with the sounding-board of a musical instrument and reinforcing-pieces secured thereto, of one or more

truss-wires having their ends anchored to the board at the points where the board is reinforced and rests or struts inserted between the board and the truss-wire, substantially as set forth.

5 4. The combination, with the sounding-board and the truss-wire secured thereto, of

the dampers connecting the truss-wire with the board, substantially as set forth.

EDWARD STROUD.

Witnesses:

GEORGE BARRY,
D. H. HAYWOOD.