

J. H. MONTGOMERY.
 DEVICE FOR FLEXING OR CROWNING THE SOUNDING BOARDS OF PIANOS.
 APPLICATION FILED JUNE 27, 1911.

1,048,195.

Patented Dec. 24, 1912.

Fig. 1.

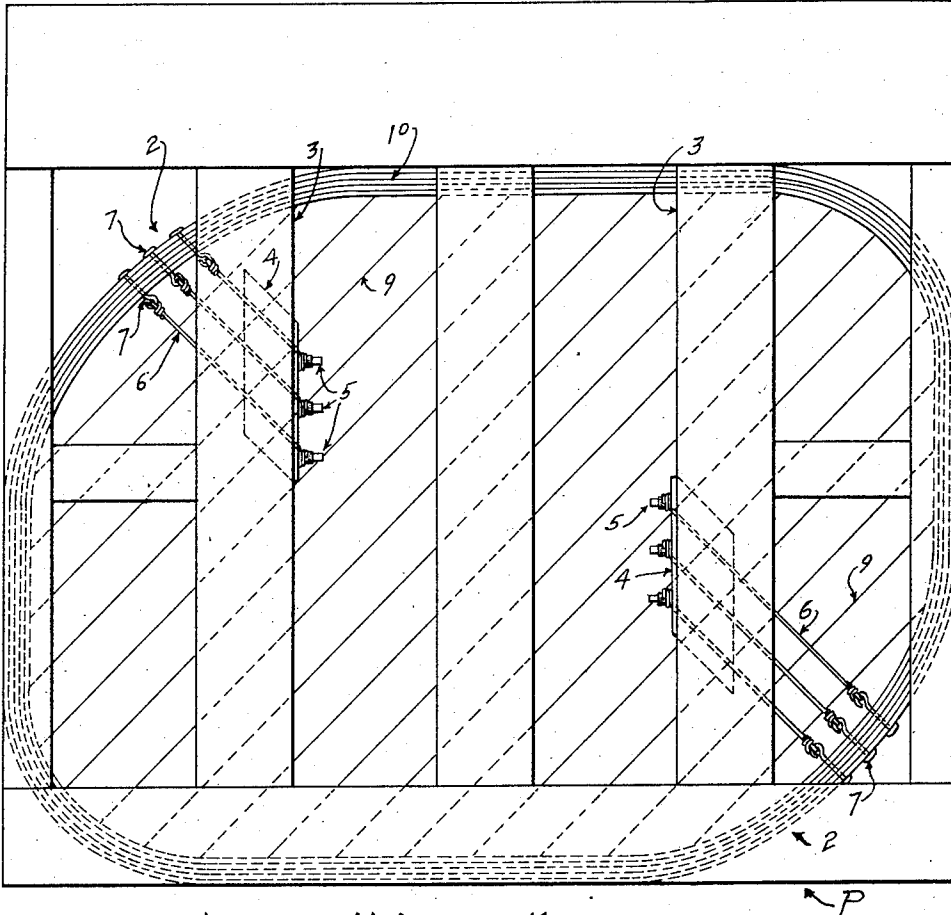
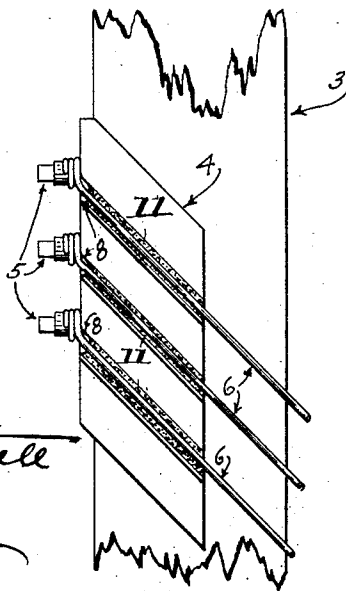


Fig. 2.



George H. Montgomery.
 Inventor:

Witnesses:
 John P. Steele
 G. R. Brown

UNITED STATES PATENT OFFICE.

JESSE H. MONTGOMERY, OF LOS ANGELES, CALIFORNIA.

DEVICE FOR FLEXING OR CROWNING THE SOUNDING-BOARDS OF PIANOS.

1,048,195.

Specification of Letters Patent.

Patented Dec. 24, 1912.

Application filed June 27, 1911. Serial No. 636,373.

To all whom it may concern:

Be it known that I, JESSE H. MONTGOMERY, a citizen of the United States of America, residing at Los Angeles, county of Los Angeles, State of California, have invented a new and Improved Device for Flexing or Crowning the Sounding-Board of a Piano, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to sounding boards—particularly to a certain new, useful and improved device to crown or flex the sounding boards in pianos—and it has for its object to provide a new, improved and efficient device which is adapted to be operated at will to warp, flex or bend a sounding board or other stiff board of any substance or material.

With the above and other objects in view, the advantages of which will be apparent to those skilled in the art, the invention may be said to consist in the provision of the novel features and in the novel and improved construction, arrangement and combination of parts as will be apparent from the description and claim which follow, taken in connection with the accompanying drawings, in which—

Figure 1 is an elevation of the rear of a form of upright piano having the invention applied thereto, Fig. 2 is a fragmentary view on the inside of the upright post, showing the portion of the device which is connected with the post.

The crowning or flexing of sounding boards in pianos has heretofore in some instances been accomplished by means of screws operated from a convenient corner of the back frame of the pianos, which has the effect of causing a great pressure on the said corner of the frame difficult to maintain, and also causes rigidity of the sounding board which interferes with the desired vibration of the same.

To give more freedom to the sounding board and enable a great force to be exerted upon the sounding board for crowning or flexing purposes, and to enable the crowning or flexing to be adjusted and maintained easily for an indefinite period by a simple and inexpensive method, and to permit of vibration of the sounding

board of a piano so that a full, round and mellow tone may be produced, the device hereinafter described has been invented.

The sounding board 2 for the purposes of this invention may consist of the boards 9, constructed and arranged in the usual manner, and it may be made almost any shape, but preferably substantially oval, longer horizontally than vertically, as shown in Fig. 1 of the drawings. Around the edge of the sounding board 2 and securely rabbeted or fastened to the same, is a rim 10, preferably laminated and consisting of rock maple veneers. This rim may consist of a number of very thin pieces of rock maple, or other suitable material, securely glued together to give the same greater strength. This laminated rim may be substantially one and one half inches square, and extend entirely around the edge of the sounding board. One or more heavy steel wires 6 may be secured to bolts 7, passing through the laminated rim, and to winding pins 5 which are constructed and operated the same as are piano tuning pins. The pins 5 may be fastened through a metallic angle plate 4 suitably secured to a post 3 on the rear of the frame of a piano P. The wires 6 extend at the proper angle from the bolts 7 to the pins 5, passing over the plates 4 and through notches 8 at the corner of the plates.

When a sounding board is put into a new piano, the same is usually flexed or crowned before being placed in position. After the piano has been used for a time, from various causes the sounding board becomes flattened and the quality and volume of the tone of the piano are greatly deteriorated. By means of the device described, preferably disposed at two opposite points adjacent to corners of the piano frame, an enormous pressure can be put on the laminated rim 10 and the sounding board by using a tuning hammer on the pins 5 to turn the latter and wind the wires 6 thereon, in tuning a piano. This pressure can be exerted at will to crown or arch the sounding board 2 and also to maintain the crown, or arch, of the sounding board indefinitely; thus assuring a full, round, sustained and mellow tone when the device is used in connection with a piano. Across the iron plates 4 and under the wires

6 may be disposed suitable deadening substance 11 such as felt, cork or the like, to prevent noisy vibration of the wires 6.

I claim:

- 5 A piano having a frame and a sounding board arranged adjacent thereto, a rim affixed to the edge portion of the sounding board, bolts affixed to substantially opposite portions of said rim, plates on said
10 frame adjacent to said bolts, winding pins on said plates, and wires secured to said

bolts and to said winding pins, said wires adapted to draw the opposite portions of said rim toward each other when the winding pins are actuated, substantially as and 15 for the purpose set forth.

In witness whereof, I have hereunto set my hand this 21st day of June, 1911.

JESSE H. MONTGOMERY.

Witnesses:

JEHU P. STEELE,
G. R. BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents
Washington, D. C."
