

(No Model.)

P. WUEST, Jr.
SOUNDING BOARD FOR PIANOS.

No. 486,013.

Patented Nov. 8, 1892.

FIG. 2.

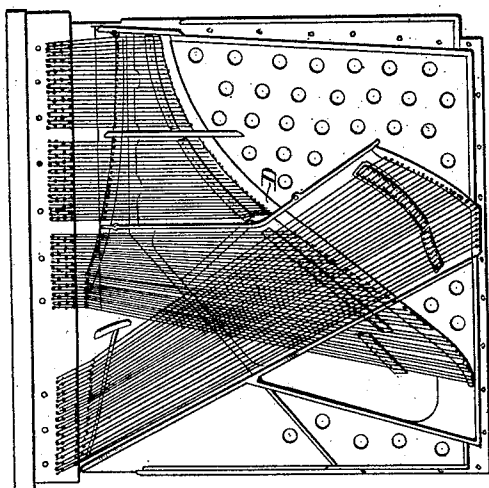


FIG. 3.

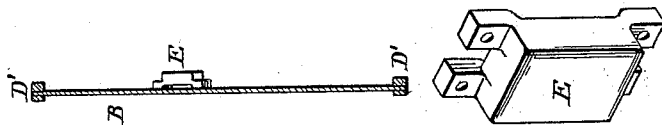
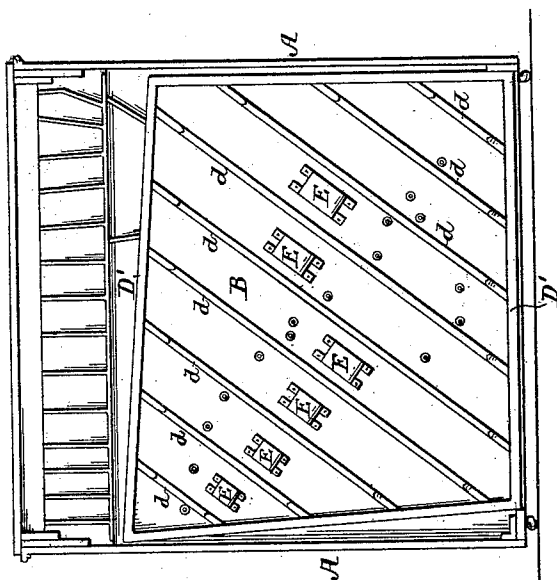


FIG. 4.

FIG. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

PHILIP WUEST, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
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SOUNDING-BOARD FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 486,013, dated November 8, 1892.

Application filed August 27, 1892. Serial No. 444,261. (No model.)

To all whom it may concern:

Be it known that I, PHILIP WUEST, Jr., a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Sounding-Boards for Pianos, of which the following is a specification.

The object of my invention is to increase the vibration of the sounding-board of upright pianos. This object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a rear view of the piano with the back-frame removed, showing the rear of the sounding-board. Fig. 2 is a face view of the sounding-board and frame, showing the arrangement of strings. Fig. 3 is a vertical sectional view of the sounding-board, and Fig. 4 is a perspective view of one of the weights.

It is desirable in the manufacturing of upright pianos to provide a sounding-board that will sufficiently vibrate to give the tone required and at the same time be strong enough to withstand the strain placed upon it. Pianos have been made with very thin sounding-boards, and while these sounding-boards will have sufficient vibration they nevertheless are too weak for the purpose and frequently crack and are thus destroyed, and consequently thick sounding-boards have come into general use, as the depth of tone has been sacrificed for strength.

The object of my invention, therefore, is to construct a thick sounding-board that will have the necessary vibration without weakening the same and without adding materially to the cost of the piano.

A is the frame of the piano.

B is the sounding-board mounted in the frame, as usual.

D is the metallic frame, to which are attached the strings. I have shown in the drawings the strings arranged in a peculiar manner; but it will be understood that this simply illustrates one arrangement of strings, and as the arrangement of strings is immaterial it will be understood that other arrangements may be used without departing from my invention.

As shown in Fig. 1, the sounding-board B is bound by a frame D' and supported by a series of inclined ribs *d*, running at right angles to the grain of the wood comprising the sounding-board. I secure to the back of the sounding-board a series of weights E, as clearly shown in Figs. 1 and 3. These weights are preferably of the form shown in Fig. 4 and so secured to the sounding-board that they do not interfere with the tone of the instrument by providing very little contact-surface. I preferably arrange the weights in a series and grade them from light to heavy, attaching the light weights to the sounding-board back of the treble-strings and gradually increasing their weight and attaching the heavy weights to the sounding-boards directly back of the bass-strings, and the weights are arranged at such a distance apart that their area of vibration will encompass the entire sounding-board. It will be understood that different forms of weights may be used and weights differing in size, depending upon the character of instrument to which they are attached. Thus it will be seen that by attaching the weights to the sounding-board the vibration of the sounding-board is increased, owing to the increased weight at the points indicated, and consequently the tone of the instrument is greatly improved, combining the advantages of a thin sounding-board with the advantages of a thick sounding-board.

I claim as my invention—

1. As a new article of manufacture, a sounding-board for upright pianos, having a weighted center for the purpose of increasing its vibration, substantially as specified.

2. The combination, in an upright piano, of the strings and a sounding-board, with weights attached to the sounding-board, whereby its vibration is increased, substantially as described.

3. The combination, in an upright piano, of the frame, the strings, and the sounding-board having a series of weights attached thereto, said weights diminishing in size from the bass to the treble from a point back of the bass-strings to a point back of the treble-strings, substantially as described.

4. The combination of the sounding-board
with a weight or weights having a hollow cen-
ter and small bearing-surface, with means for
attaching the weights to the sounding-board
5 without detracting materially from the tone,
substantially as described.

In testimony whereof I have signed my

name to this specification in the presence of
two subscribing witnesses.

PHILIP WUEST, JR.

Witnesses:

WILLIAM M. STEWART, Jr.,

HENRY HOWSON.