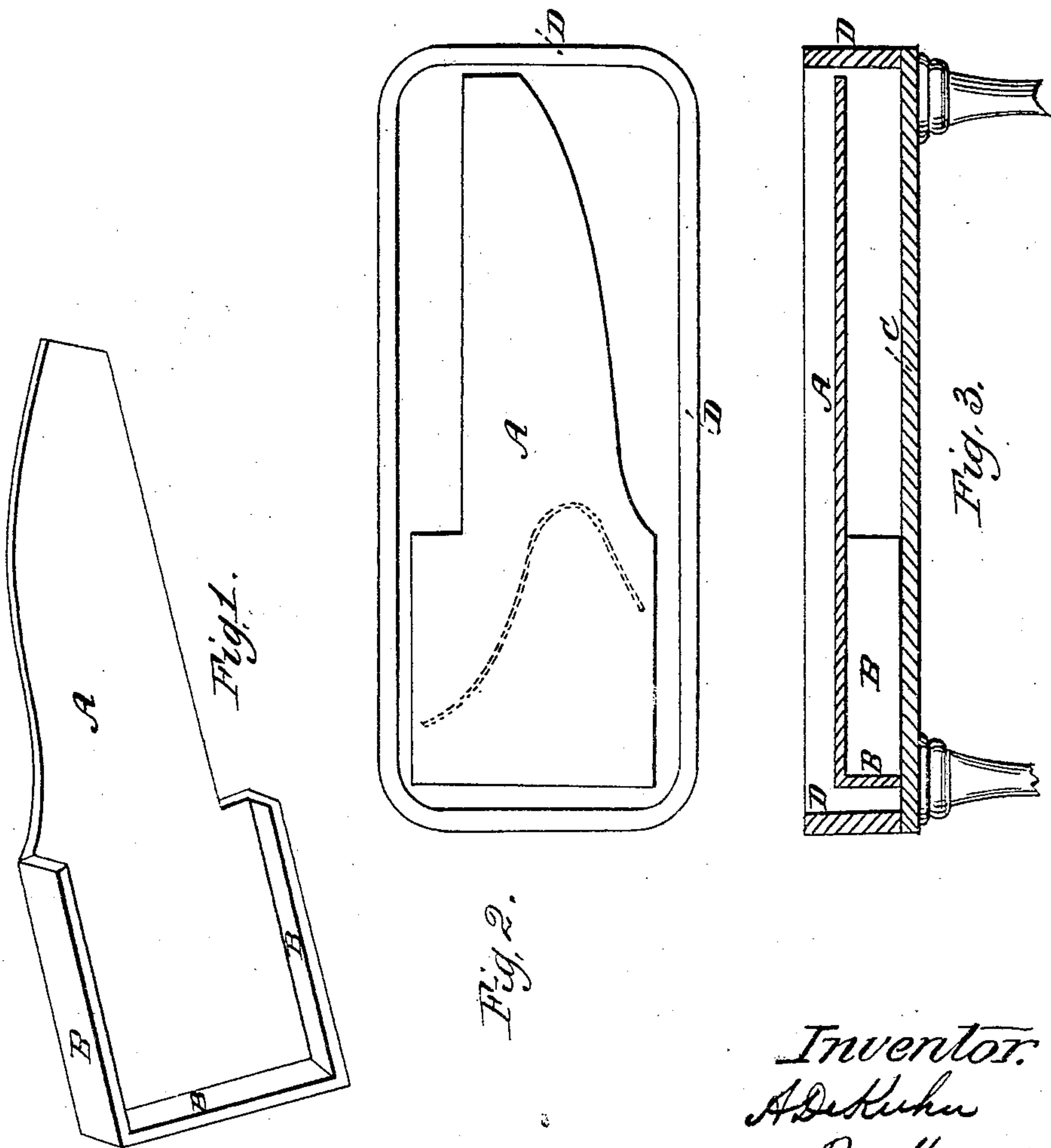


A. De Kuhn,
Piano Sounding Board,
Nº 57,912. Patented Sep. 11, 1866.



Witnesses.

E. L. Topliff.
Theo. Tusch.

Inventor.
A. De Kuhn
*By *[Signature]**
Attys.

UNITED STATES PATENT OFFICE.

A. DE KUHN, OF NEW YORK, N. Y.

SOUNDING-BOARD FOR PIANOS.

Specification forming part of Letters Patent No. 57,912, dated September 11, 1866.

To all whom it may concern:

Be it known that I, A. DE KUHN, of the city, county, and State of New York, have invented new and useful Improvements in Sounding-Boards for Pianos; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of my improved sounding-board. Fig. 2 is a top or plan view of my improved sounding-board in position in the piano-case, showing in dotted lines the relative position of the bridge. Fig. 3 is a vertical longitudinal section of Fig. 2 through the longest part of the sounding-board.

My invention relates to the form and construction of the sounding-board in pianos, and to the manner in which they are attached to the case or frame of the piano.

In the construction of piano-fortes it is well known that small pianos have a hard short tone, arising from the small extent of the vibrating part of the sounding-board. To obviate this difficulty, pianos were increased in size, in order to obtain a larger sounding-board. This effected the desired object; but use showed it to be attended with difficulties and objections, for it was found that this increase in the size of the piano made the instrument so broad that it was difficult to reach the pins in tuning; and it was also found that the large sounding-board would in time sink down, losing its stiffness, vibration, and echo.

The object of my invention is to obviate these difficulties; and said invention consists in constructing the part of the sounding-board beneath the bridge in box form, and in attaching the sounding-board to the case of the piano by gluing the lower edges of the sides and end of the box-shaped part of the sounding-board to the bottom of the piano-case, in the manner hereinafter more fully described.

If we put a sounding-board upon posts or props and strike it, it gives a thin rattling ring, and only echoes when struck in the middle. If we fasten it in or to a solid frame like a piano's, we find that the frame prevents the sounding-board from vibrating for from three to four inches from the edges of the board that are attached to the solid frame, and that

the tone near the frame is very short and hard. If we now take a box and fasten a sounding-board over it, we find that the board when struck gives a full echo, and by placing our hands upon the sides of the box we can feel the vibrations, proving that the end and sides of the box combine in vibrating, and consequently in producing sound.

In my improved sounding-board I make the top board, A, of the usual form of sounding-boards in ordinary pianos. Then to the under surface of the board A, close to the edge of said board, around the sides and end of that part of the board which is under the bridge, I glue side pieces, B, of the same material and quality as the top board, A. These pieces B should be six inches wide in pianos of the ordinary size; but in different-sized pianos their width should be varied with the variations of the height which the proper action of the instrument requires. The lower edges of these pieces B, I then glue securely to the upper surface of the bottom C of the piano, as represented in Fig. 3, in such a way that the sounding-board shall be free from the sides D of the case or frame of the piano all round, as represented in Fig. 2.

The side pieces, B, may be attached to the top board, A, otherwise than by gluing, the essential thing being that they should be so attached as to form essentially one board—that is to say, so closely attached that the vibrations of the top board, A, shall be continued into the pieces B, and all the parts of the sounding-board vibrate in unison; or the top board, A, and the pieces B may be made in one piece, if thought desirable.

The lower edges of the pieces may also be attached to the bottom C of the piano-case in any way that will give a strong and permanent attachment, and that will not interfere with the vibrations of the sounding-board.

I claim as new and desire to secure by Letters Patent—

A sounding-board made in box form, detached from the sides of the case, substantially as described, and for the purpose set forth.

The above specification of my invention signed by me this 11th day of September, 1865.

A. DE KUHN.

Witnesses:

M. M. LIVINGSTON,
C. S. E. TOPLIFF.