UNITED STATES PATENT OFFICE.

JUSTUS HATTERMER, OF CLIFFSIDE PARK, NEW JERSEY, ASSIGNOR TO BRAMBACH PIANO COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

SOUNDING-BOARD MOUNTING FOR GRAND PIANOS.


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To all whom it may concern:

Be it known that I, JUSTUS HATTERMER, a citizen of the United States, residing at Cliffside Park, Bergen county, State of New Jersey, have invented a new and useful Improvement in Sounding-Board MOUNTINGS for Grand Pianos, of which the following is a specification.

The object of this invention is to mount the horizontally disposed sounding board rigidly in the casing of a grand piano so as to allow the same to vibrate very freely, and so that the sound waves will pass unrestrictedly to the atmosphere from below the sounding board as well as above the same up and out through the casing.

The construction is illustrated in various forms in the accompanying drawings, referring to which—

10 Figure 1 is a plan and Fig. 2 is a sectional elevation of a grand piano casing with a sounding board mounted therein according to my invention;

Fig. 3 is a partial perspective view illustrating a part of the supporting means for the front or straight edge of the sounding board;

Fig. 4 is a view similar to Fig. 1 illustrating a modification, and

Fig. 5 is a cross sectional elevation through the front or straight edge of the sounding board, illustrating a further modified form of supporting means.

Referring to the drawings and in detail, 20 2 represents a sounding board of the usual shape and construction having a straight front edge and a rear curved edge shaped to conform to the casing 3 of a grand piano. The sounding board is horizontally disposed in the casing and is rigidly supported therein. The supporting means 1 at the front of the instrument is illustrated in Figs. 2 and 3. The same consists of an angular-shaped frame which is preferably made or built up of pieces of wood glued together. This supporting means has air channels through the same formed by openings or perforations 4 which, in the completed instrument, allow communication to the outside atmosphere from under the sounding board up through the perforations and out through the casing.

The support for the sounding board along its curved edge at the rear is provided with suitable ports or upright passages which connect with horizontal passages through the under horizontal part of the piano casing, and the rear circular edge of the sounding board is provided with notches or holes to register with these perforations 5, this construction forming open air channels.

By this arrangement, it will be seen that air channels extend through the supporting means for the sounding board both along its straight front edge and along the curved edge thereof. By this construction the body of the sounding board is much freer to vibrate than where the supporting means is made solid, and the sound waves can pass freely to the atmosphere up and out through the top of the casing from below as well as above the sounding board.

In Fig. 4 a modification is shown, wherein the top member of the supporting means 1 for the straight or front edge of the sounding board has only one air channel 4.

A further modification is shown in Fig. 5, wherein the horizontal part of the supporting means for the straight or front edge of the sounding board is provided with air channels 7.

The details and arrangements herein shown and described may be modified by a skilled mechanic without departing from the scope of my invention as expressed in the claims.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent is—

1. In a grand piano, the combination of a casing, a sounding board horizontally disposed therein, and supporting means rigidly sustaining said sounding board in position along its straight and curved edges in the casing and having air channels through the same along said casing, and an air channel or air channels through the supporting means for the straight edge of the sounding board, whereby the sound waves can pass to the atmosphere from underneath the sounding board up and out through the casing.

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3. In a grand piano, the combination of a casing, a sounding board horizontally disposed therein, supporting means sustaining said sounding board along its straight and curved edges in said casing, and air channels through the supporting means for the curved edge of said sounding board, whereby the sound waves from underneath said sounding board can pass to the atmosphere through said air channels up and out through the casing.

4. In a grand piano, the combination of a casing, a sounding board horizontally disposed therein, supporting means sustaining said sounding board along its straight and curved edges in said casing, and air channels through both the supporting means for the straight edge and through the supporting means for the curved edge, whereby the sound waves can pass from underneath said sounding board through said air channels up and out to the atmosphere through the casing.

Signed at the city, county and State of New York this 11th day of September, 1917.

JUSTUS HATTEMER.

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