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A. VREDENBURGH

SOUNDING BOARD FOR MUSICAL INSTRUMENTS AND METHOD OF MAKING THE SAME

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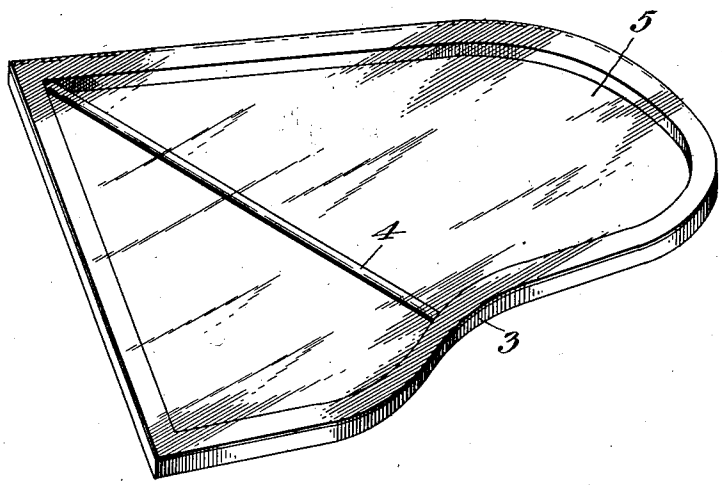


Fig. 1.



Fig. 2.

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UNITED STATES PATENT OFFICE.

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SOUNDING BOARD FOR MUSICAL INSTRUMENTS AND METHOD OF MAKING THE SAME.

Application filed January 15, 1925. Serial No. 2,609.

To all whom it may concern:

Be it known that I, ARTHUR VREDENBURGH, a citizen of the United States, residing at Ormond, in the county of Volusia and State of Florida, have invented certain new and useful Improvements in Sounding Boards for Musical Instruments and Methods of Making the Same, of which the following is a specification.

The present invention relates to sounding boards for pianos and other musical instruments, and the object is to provide a structure that will give a more even full tone and desirable resonance, said structure at the same time being simple in its character and easily applicable to ordinary instruments without materially altering their general combination and arrangement of parts.

In the accompanying drawing one embodiment of the invention is shown, and in said drawings—

Figure 1 is a perspective view of a sounding board for a "grand" piano.

Figure 2 is a cross sectional view therethrough.

In the embodiment disclosed the usual open frame is designated 3, and may be of any desirable material or form, depending upon the particular instrument in which the device is to be employed. In the present embodiment this frame is illustrated as having a brace 4 extending diagonally from an intermediate portion of its curved side into the corner.

Covering the space defined by the frame is a diaphragm member 5, preferably formed of a single sheet of celluloid or corresponding plastic material that is fastened at its margins to the frame and is put under tension.

This is accomplished by softening the celluloid sheet and making it elastic. I have discovered that if the sheet is subjected to the following fluid composition, the desired effect can be obtained.

In each quart of wood alcohol there is dissolved one-half ounce of camphor, and to each gallon of the same there is added two ounces of sulphuric ether. About four ounces or one-quarter of a pint of water is then added to each gallon, and when the celluloid sheet is treated to this composition either by dipping it therein or applying it to the surfaces thereof, the said sheet becomes rubbery and elastic, and capable of being stretched. In this condition then it can be stretched and suitably secured by its margins in stretched condition to the frame.

I have found that a very satisfactory method of securing it is by a water-proof cement, consisting of four ounces of celluloid dissolved in one gallon of amyl acetate, with approximately four ounces of ether. If this cement is applied to one face of the frame, as indicated at 6, in Figure 2, and the sheet is stretched thereupon and attached by the cement and the whole allowed to harden, the celluloid reassumes its original condition and contracts materially, thus putting it under relatively high tension. As a consequence a sounding board is produced that is different from wood laminæ and has a resonance and even tone that is peculiarly desirable for musical instruments.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim, is:—

1. A sounding board comprising a frame, and a diaphragm consisting of a previously formed celluloid-like sheet that has been stretched and is permanently secured in stretched condition to the frame.

2. The method of producing sounding boards, which consists in softening a previously formed sheet of celluloid-like material, after such softening securing it at the margins to a sounding board frame and thereafter allowing said sheet to harden and contract.

3. The method of producing sounding boards which consists in softening a sheet of celluloid, while said sheet is in softened condition, stretching it and mounting it on a sounding board frame, and allowing said sheet to harden after being thus mounted.

4. The method of producing sounding boards which consists in making a sheet of celluloid elastic, stretching the elastic sheet

and mounting it by its margins on a sounding board frame, and after mounting, hardening the sheet.

5. The method of producing sounding boards which consists in treating a sheet of celluloid-like material with a fluid composition including alcohol, camphor, and sulphuric ether, thereby making said sheet elastic, stretching the elastic sheet, and mounting it by its margins on a sounding board frame, and after mounting, hardening the sheet.

In testimony whereof, I affix my signature.

ARTHUR VREDENBURGH.