

No. 777,939.

PATENTED DEC. 20, 1904.

C. B. CLEMONS.
PIANO SOUNDING BOARD.
APPLICATION FILED MAR. 14, 1904.

NO MODEL.

Fig. 1.

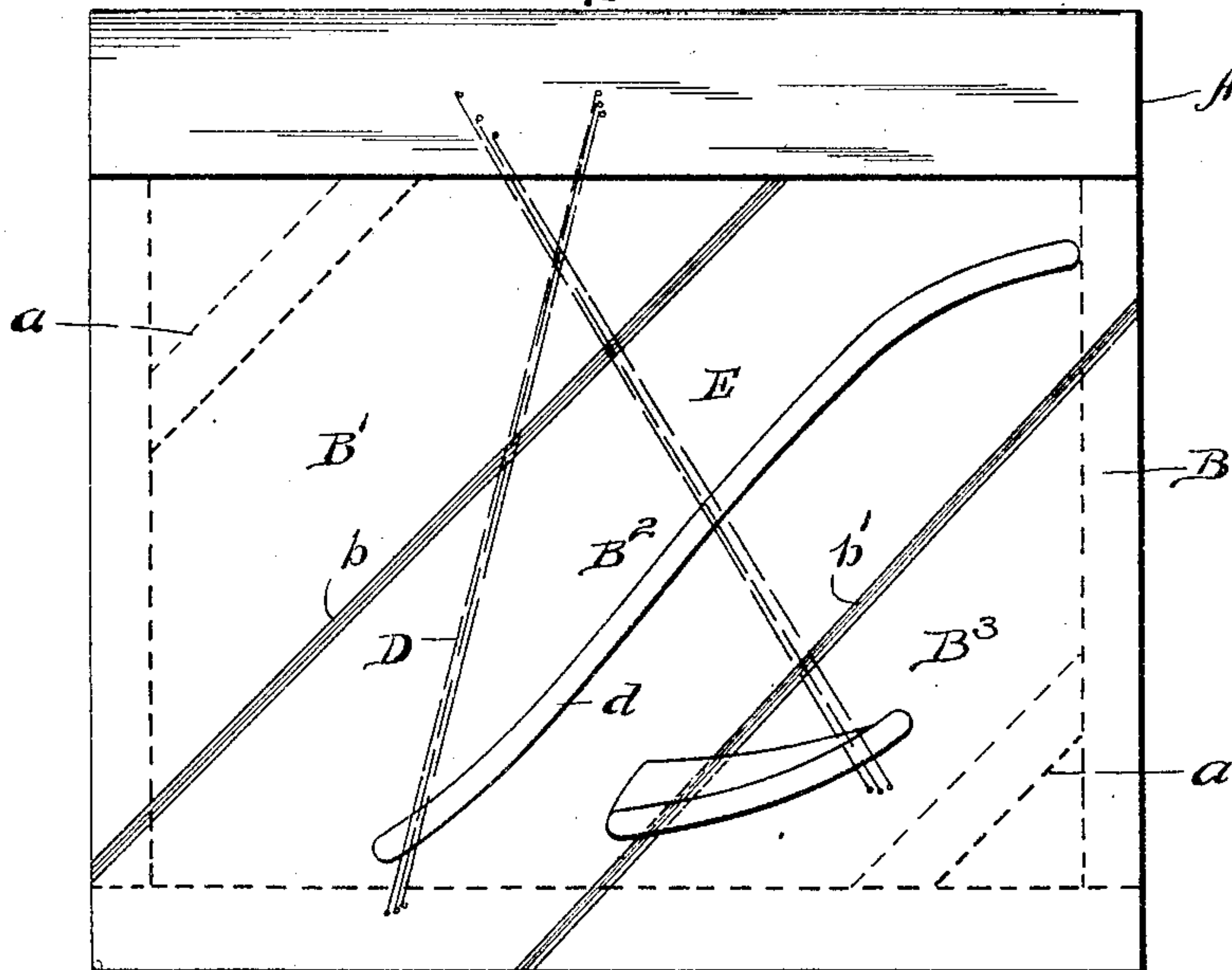
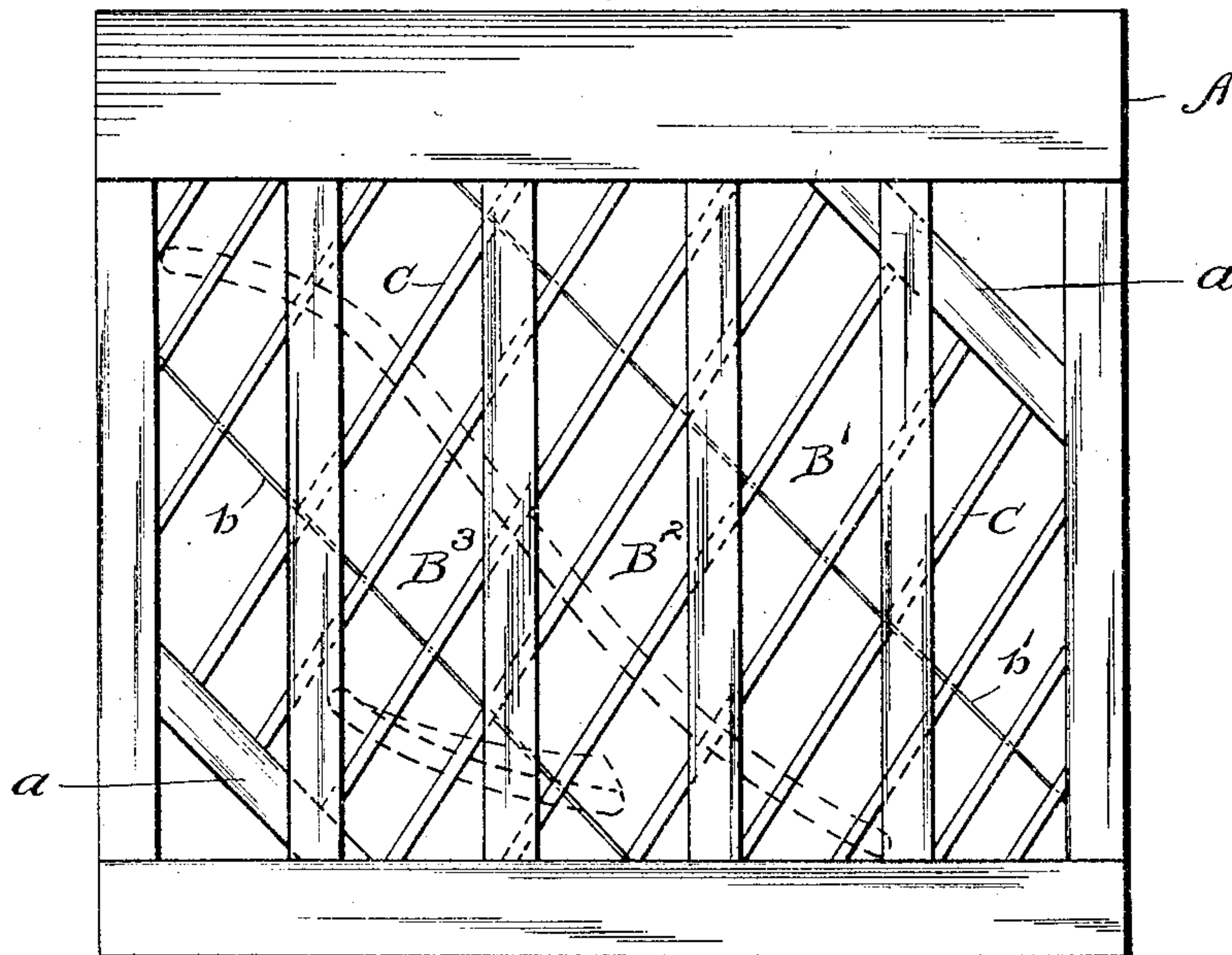
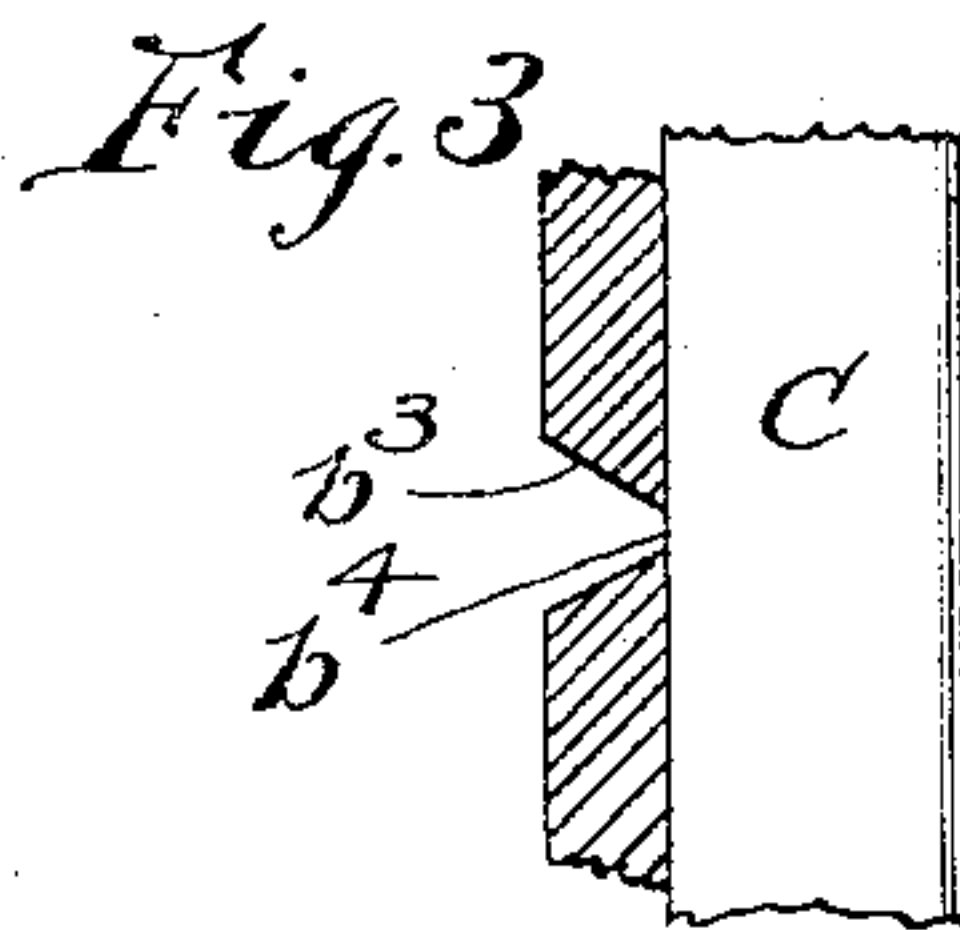
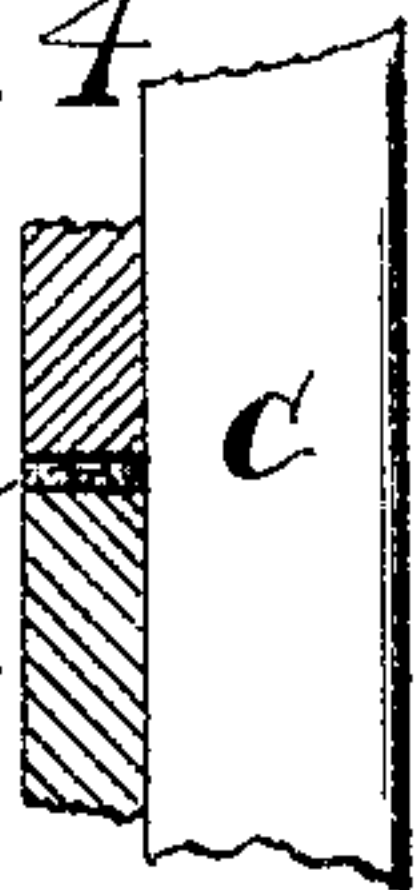


Fig. 2



Witnesses: *Fig. 4*
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UNITED STATES PATENT OFFICE.

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PIANO SOUNDING-BOARD.

SPECIFICATION forming part of Letters Patent No. 777,939, dated December 20, 1904.

Application filed March 14, 1904. Serial No. 197,912.

To all whom it may concern:

Be it known that I, CHARLES B. CLEMONS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Piano Sounding-Boards, of which the following is a specification.

This invention relates to sounding-boards for pianos or other musical instruments in which such devices are used.

Sounding-boards which are constructed according to the present methods consist of a single plane of suitable material, preferably spruce or other varieties of wood. The sounding-board vibrates uninterruptedly or as a whole, all parts being responsive to the vibration of each wire. As excessive vibration of the sounding-board is deemed undesirable, it is customary for manufacturers to block off the corners of the boards by heavy cleats, thus rendering the corners non-vibratory.

The objects of the present invention are to provide a sounding-board which is adapted to regulate and lessen the vibration of the total surface and to provide a sounding-board which is more economical in construction than those at present used and which will not be as readily affected by differences in temperature or humidity.

Other objects will also appear hereinafter.

I accomplish these objects by making the sounding-board in separate sections which are connected by suitable ribs, the latter transmitting a partial vibration from section to section to produce the desired tone.

In the accompanying drawings, illustrating this invention, Figure 1 shows a front elevation of a sounding-board embodying this invention, the plate being removed and a few wires being indicated by dotted lines. Fig. 2 is a rear elevation of the device shown in Fig. 1. Fig. 3 is a detail view showing a portion of one of the ribs with the adjoining edges of two sections. Fig. 4 is a detail view showing a portion of one of the ribs with the adjoining edges of two sections connected by a strip of suitable yielding material.

As shown in the drawings, A represents as a whole the frame in which the sounding-board B is mounted. The blocking-off cleats

a may be used, if desired, with my improved sounding-board, but form no part of this invention. The sounding-board B in the present instance is divided at $b\ b'$ to form three sections $B^1\ B^2\ B^3$. These sections or the board as a whole is supported at the back by means of ribs C. The adjoining edges of the sections may be formed in any desired manner. For instance, they may be beveled, as shown at b^3 , Fig. 3, and a small space b^4 left between the opposite edges in order to allow for the swelling or expansion of the different sections and to prevent their becoming vibrant through direct contact. The vibratory movement may be illustrated as follows: The section B^2 is set in vibration by the wires D through the bridge d at the point where said wires come in contact with said bridge. This vibration is carried indirectly to the sections $B^1\ B^3$ by means of the ribs C. In the same manner the interrupted or indirect vibration caused by the wires E is carried from the section B^3 to the section B^1 .

It is obvious that any desired number of sections may be used, their size and position being determined by the manufacturer in applying the same to various styles of pianos or other musical instruments. It will be noted, however, that the arrangement shown with the divisions crossing the board in substantially the opposite direction from the ribs is deemed the preferred form.

This invention provides means whereby the sounding-board tones may be regulated by the indirect vibration from section to section.

The sounding-boards may be manufactured with greater facility than those at present used, as the sections may be more easily worked to the proper thickness than one large board of varying thickness. Narrower (and consequently less select) lumber may be used and smaller shipping-cases employed for shipping the sounding-boards. It is also well known that the large single boards made at the present time are very susceptible to the influence of heat and cold and moisture or dryness and frequently become split or cracked, thereby injuring the tone or destroying the musical effect of the piano. These objections are particularly applicable to pianos standing in

steam-heated apartments. By means of my improved sectional sounding-board this liability to crack or split is largely obviated and results in producing a more lasting and permanent sounding-board.

In some instances the adjoining edges of the sections of my improved board may be made square and butted directly together, in which case the vibration would be carried more directly from one section to another, but the danger of splitting or cracking would be largely done away with. When this form of construction is employed, a strip F of suitable yielding material—such as felt, buckskin, or the like—is inserted between the adjoining edges, as shown in Fig. 4. This will allow for contraction or expansion of the sections and will prevent discordant sounds at the connecting edges.

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

1. A sounding-board comprising a plurality

of sections with strips of yielding material inserted between the adjoining edges of said sections.

2. A sounding-board comprising a plurality of sections, strips of buckskin or the like inserted between the edges of said sections, and ribs across said sections.

3. A sounding-board having one or more lines of division through the same forming adjacent square edges, and strips of yielding material inserted between said edges.

4. The combination of a frame, a sounding-board mounted in said frame, a main bridge extending diagonally across said board, lines of division formed across said board in substantially the same direction as said bridge and at a distance therefrom, and ribs extending at substantially right angles to said lines of division across the back of said board.

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Witnesses:

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LE GRAND KNIFFEN.