Jos. Bini's Impd Bracing for Guitar Sounding-Boards.

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PATENTED
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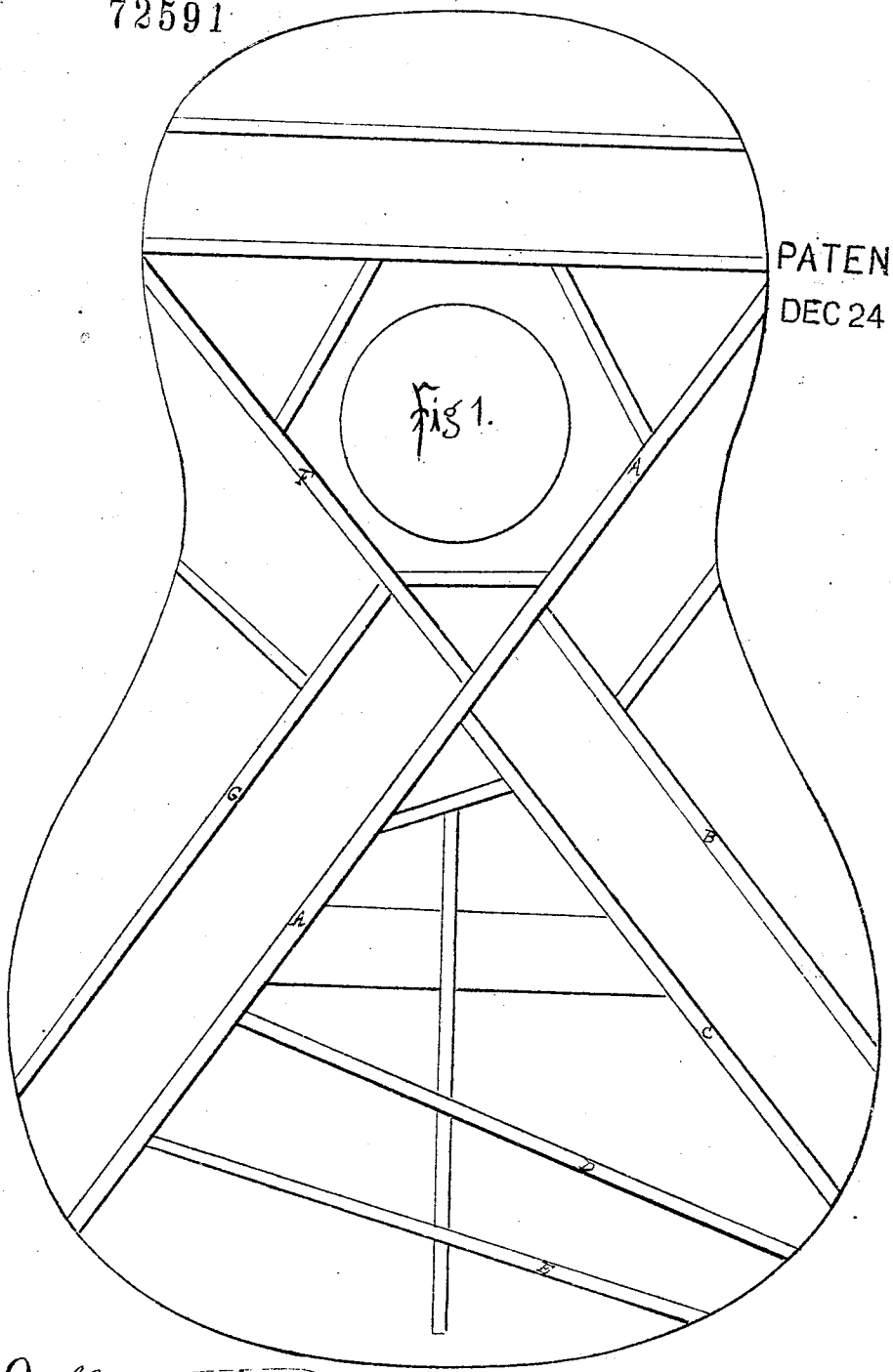


Fig 1.

Witnesses: A. Hayden, Howard
Edw. F. Kipple.

Joseph E. Bini Inventor

United States Patent Office.

JOSEPH E. BINI, OF MOUNT VERNON, NEW YORK, ASSIGNOR TO JAMES E. JOUETT AND CHARLES H. CUSHMAN.

Letters Patent No. 72,591, *dated December* 24, 1867.

IMPROVEMENT IN BRACING THE SOUNDING-BOARDS OF GUITARS.

The Schedule referred to in these Letters Patent and making part of the same.

TO WHOM IT MAY CONCERN:

Be it known that I, JOSEPH E. BINI, of Mount Vernon, in the county of Westchester, State of New York, have invented an Improvement in the Method of Bracing the Sounding-Boards of Guitars, for the purpose of increasing the power and improving the tone of those instruments; and I do hereby declare the following to be a full and exact description thereof.

The nature of my invention consists in substituting for the old method of applying a small number of braces, placed at right angles to the length of fibre of the wood of the sounding-board, and unconnected with each other, an increased number of braces, placed diagonally to the fibre, and connected with each other, so as to take up and communicate over the whole surface of the sounding-board, and more in the direction of the length of the fibre, the action produced by the vibration of the strings, and especially in having a main brace to the whole system, upon which it depends, so placed as to greatly increase the power and tone of the treble-strings, as compared with the bass-strings, and in distributing and arranging the braces on the treble-side in a manner different and distinct from those on the bass-side, for the same purpose of giving greater musical power and tone to the treble-strings, as compared with the bass, while the power of the whole is improved, in comparison with the old method.

In order to enable others skilled in the art of guitar-making to use my invention, I describe its construction and operation, as follows:

Dispensing with the transverse braces usually placed on the part of the board in rear of the hole or rosette, I place and attach one main brace, A, leading from the swell of that part of the sounding-board on the treble-side to that of the front part on the bass-side, of such length, and at such an agle, as that it shall pass underneath (or approximately so) the treble-end of the bridge, and just clear of the edge of the hole or rosette on the bass-side, by means of which the vibration of the treble-strings is taken up and communicated over a large part of the sounding-board, and, to a greater or less extent, in the direction of the fibre. I then apply the minor braces, B, C, D, E, F, and G, connected with A, directly or indirectly, tending to communicate its vibration over and to the rear bass and front treble portions of the board, adding others, to a greater or less extent, to communicate the same over other unaffected parts. By this means the vibration of the treble-strings is made to extend to the greatest possible portion of the sounding-board. At the same time the brace C is so placed under (or approximately so) the bass-end of the bridge as to produce the same effect for the bass-strings as the main brace does for the treble, although to a less extent, and I connect the whole, as far as possible, to each other, so that no one can be independently vibrated. And I produce an arrangement of braces on the one side different from that on the other, so that while, by the whole system, the general power and tone are increased and improved, by its details, and the position of the main and other braces, the treble is more largely improved than the bass.

I claim the braces of the sound-board of a guitar, arranged, constructed, and connected substantially as described and for the purpose specified.

JOSEPH E. BINI.

Witnesses:

JAS. F. FARREL,

JOHN McKENZIE.