(No Model.)

V. BESSIER.

ZITHER.

No. 477,493. Patented June 21, 1892.

Fig. 1.

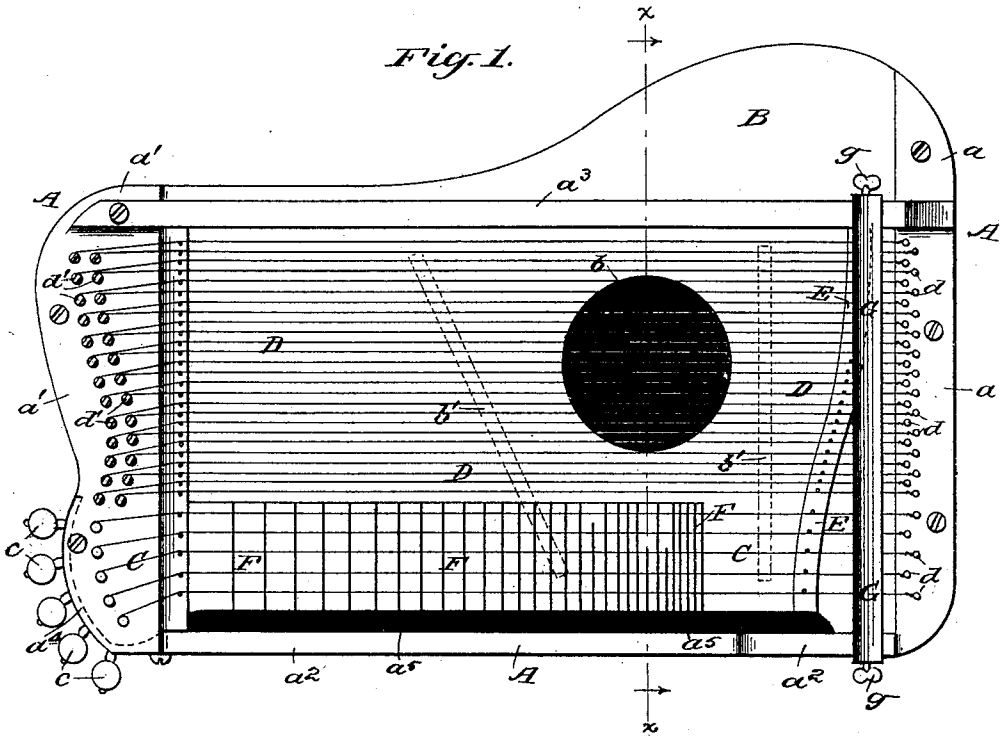


Fig. 2.

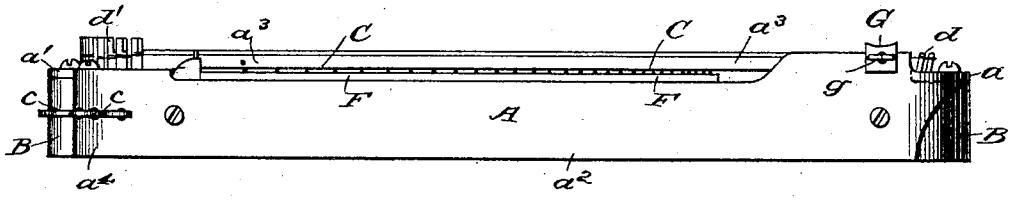
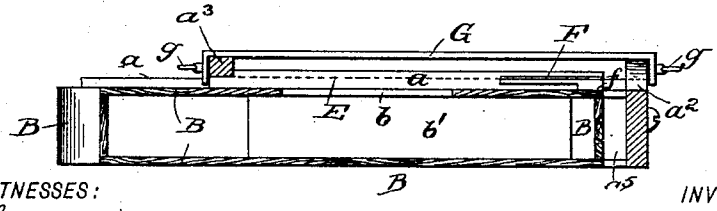


Fig. 3.



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ZITHER.

SPECIFICATION forming part of Letters Patent No. 477,493, dated June 21, 1892.

Application filed June 25, 1890. Serial No. 356,665. (No model.)

To all whom it may concern:

Be it known that I, VETAL BESSIER, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Zither, of which the following is a full, clear, and exact description.

My invention has for its object to so improve the construction of zithers that they shall give out more full clear tones and may be more conveniently used by performers than ordinary instruments of this character.

The invention consists in certain novel features of construction and combinations of parts of the zither, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improved zither. Fig. 2 is a front edge view thereof, and Fig. 3 is a transverse section taken on the line $x\ x$ in Fig. 1.

I make the string-frame A of the instrument of metal, which may be cast in one piece, as shown, and is firmly secured to the sounding board or box B by screws or in any other approved manner. The two end parts $a\ a'$ of the frame A are the hitch and tuning pin plates, respectively. The front side a^2 of the frame preferably extends vertically at the front of the sounding board or box, but has contact with the latter only at its ends, whereat the retaining-screws pass into the hitch and tuning pin blocks of the board or box. At the left-hand end the frame A has a pendent flange a^4, forming a continuation of the front side bar a^2 and providing bearings for the tuning keys or screws c, which serve to maintain the pitch of five melody-strings C at the front of the instrument, the remaining twenty or more accompaniment-strings D being applied to hitch and tuning pins $d\ d'$, set into opposite end plates $a\ a'$ of the frame A. One end of each melody-string is hitched to a pin d on the frame-plate a, as shown in Fig. 1 of the drawings. The rear side bar a^3 of the four-sided metal string-frame A connects with the end plates or bars $a\ a'$ thereof, but is raised up clear of the sounding board or box of the instrument, which has the usual sound-hole b at the top and may have a couple of interior braces or cross-stays $b'\ b'$ between its upper and lower walls or plates.

Upon the sounding-board B is glued or otherwise securely fastened a transversely-varying bridge E, over which the strings C D of the instrument pass to give the full resonant tone effect of each string in playing the instrument. It will be noticed that by providing the complete four-sided metal frame A for the strings and by passing the strings C D over the bridge E, applied to the sounding-board, and by keeping the sounding board or box entirely clear of the string-frame, except at its end parts, the sounding board or box will be relieved from excessive strains of the strings and will give each string touched by the player the best resonant effects of the entire board or box to assure full clear tones from the instrument. The clear space a^5 between the front bar or side part a^2 of the string-frame and the adjacent front edge of the sounding board or box is shown in Figs. 1 and 3 of the drawings.

The finger or fret board of the instrument occupies its usual place at the front of the zither; but instead of gluing it fast to the sounding board or box B for its entire area it is glued to the board or box at one portion only to leave the main part of the fret-board, which is hollowed out beneath, entirely above and clear of the sounding board or box, whereby the full resonant effects of the latter are not impaired by a large area of finger or fret board fastened closely to it. I prefer to fasten the fret or finger board to the sounding board or box along its front edge only—say for about one-half to three-quarters of an inch at f—and cut away the entire rear portion of the fret-board at the lower face to have it stand off clear from the sounding-board, as shown in Fig. 3 of the drawings.

In using a zither having the ordinary fret or finger board fixed for its whole area to the sounding-board, when the necessary pressure is brought onto the strings at the fret-board to produce sharp, clear tones, this finger-pressure seriously interferes with the vibrations of the sounding-board and impairs its resonant qualities; but by providing the improved fret or finger board fixed at one portion only to the sounding-board, as above described, the fin-

ger-pressure on the strings at the fret-board does not injuriously affect the vibratory and best resonant effects or qualities of the sounding-board and full clear tones are always obtainable from the strings.

The frets on the finger-board F may have any ordinary or approved construction, and the board will be marked, as usual, to indicate the notes produced by pressing the melody-strings C to the frets at various points along the board.

In musical instruments of this character a finger-rest is provided across the right-hand end, on which to rest the hand while fingering the strings. I have provided a finger-rest for this purpose; but I have made it adjustable lengthwise of the instrument to allow it to be set more or less to the right or left hand to accommodate different-sized hands of children or adults, while allowing them easily to finger the strings of the instrument at the proper places.

I am not restricted to any particular mode of making the finger-rest G adjustable on the string-frame A, which supports it; but as a simple and convenient construction I show the ends of the finger-rest bent downward or provided with pendent flanges which receive set-screws *g*, adapted to bind upon the opposite side bars or parts a^2 a^3 of the string-frame.

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

1. In a zither, the combination, with a sounding-board, of a fret-board hollowed out on its under side and having its front edge fastened to the front edge of the sounding-board, so that the hollowed-out portion extends transversely over and clear of the sounding-board to form a clear space for the full development of the sounds, substantially as shown and described.

2. In a zither, the combination, with a sounding-board, of a metallic frame secured to the said board and comprising two parallel ends forming the pitch and tuning pin plates, and two parallel sides extending over the sounding-board and attached at their ends to the frame ends, substantially as shown and described.

3. In a zither, the combination, with a metallic frame secured to the sounding-board, of a finger-rest extending transversely and held adjustable on the sides of the said frame, substantially as shown and described.

4. A zither made with a four-sided metal string-frame, a sounding board or box secured thereto, and melody and accompaniment strings on said frame, the frame having a flange receiving the tuning-keys of the melody-strings, substantially as described.

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