(No Model.)

2 Sheets—Sheet 1.

J. MERRILL.

MUSICAL INSTRUMENT.

No. 582,537. Patented May 11, 1897.

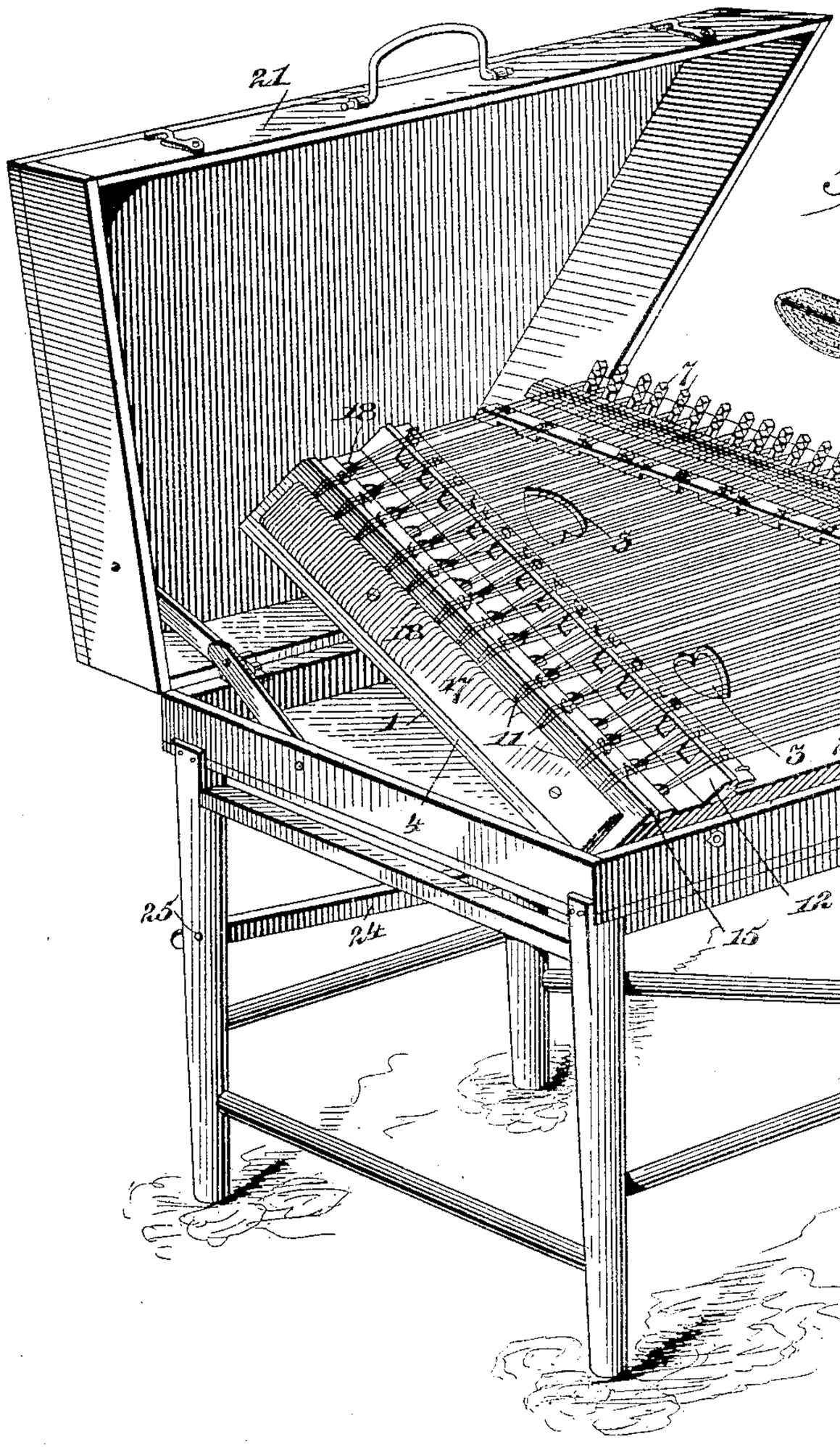

Fig: 1.

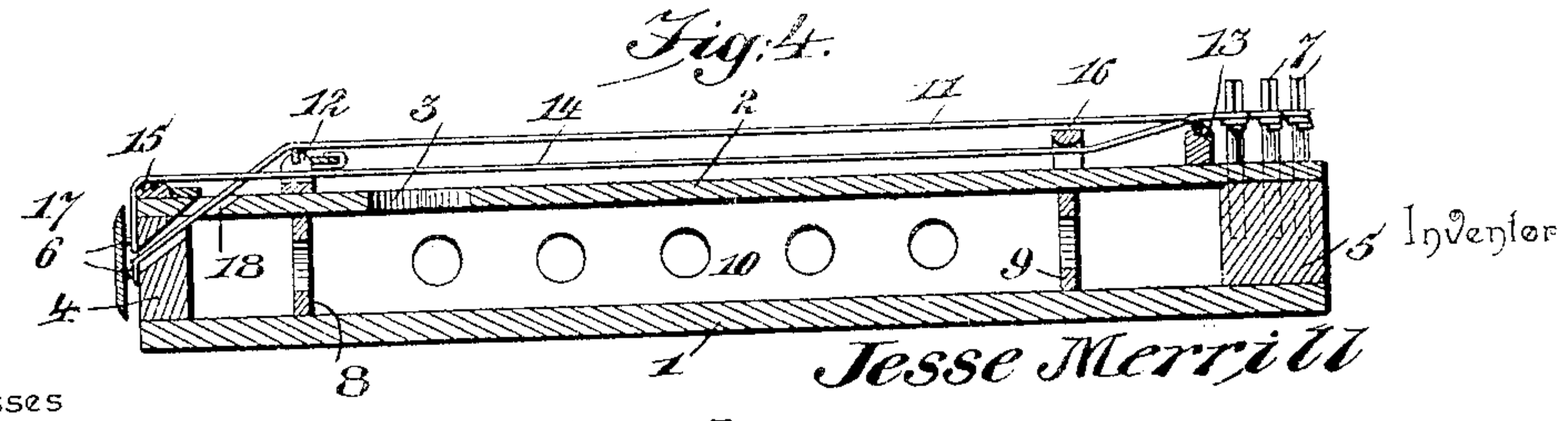

Fig: 4.

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(No Model.) 2 Sheets—Sheet 2.

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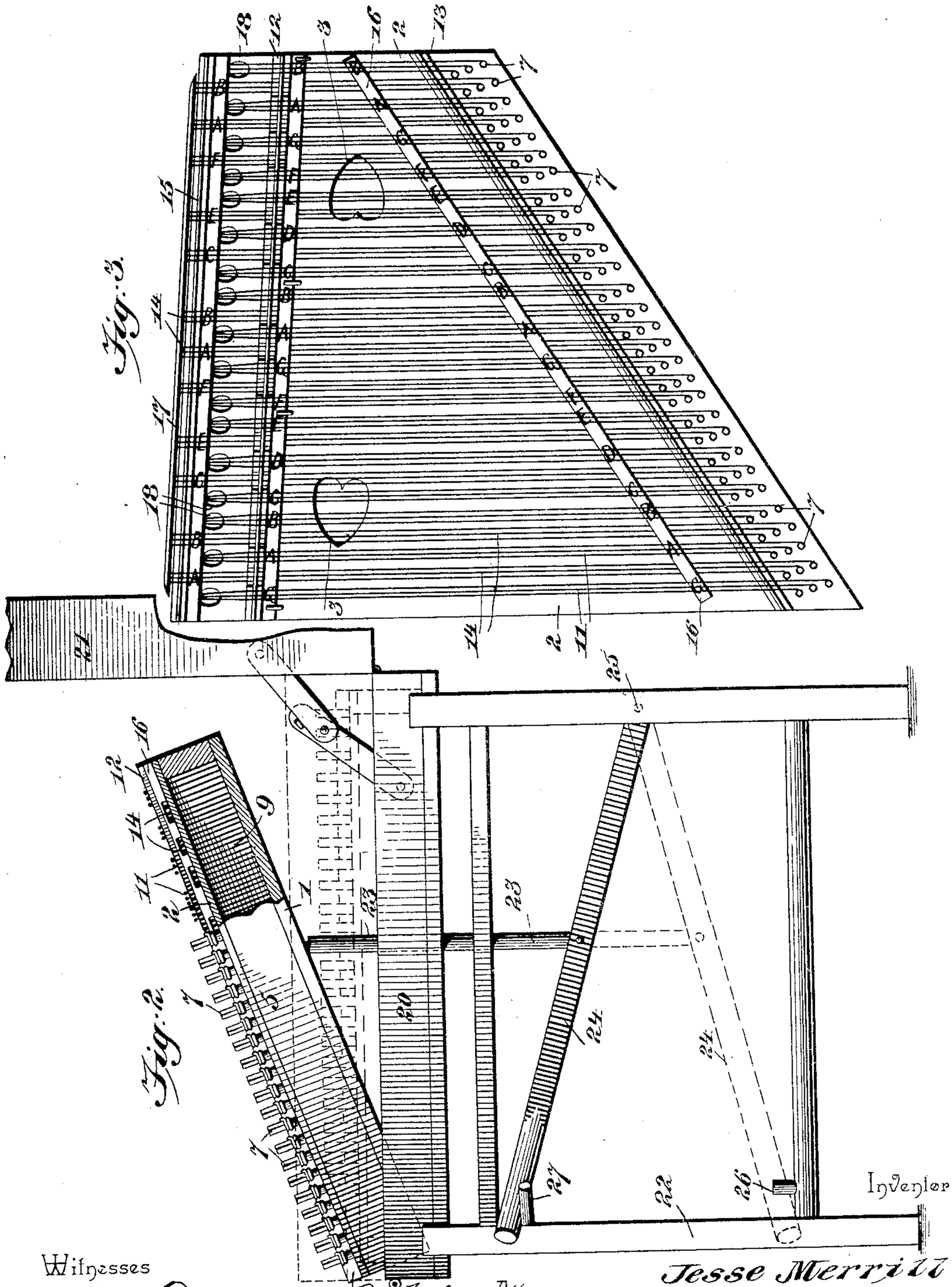

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UNITED STATES PATENT OFFICE.

JESSE MERRILL, OF KANOPOLIS, KANSAS.

MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 582,537, dated May 11, 1897.

Application filed October 31, 1896. Serial No. 610,739. (No model.)

To all whom it may concern:

Be it known that I, JESSE MERRILL, a citizen of the United States, residing at Kanopolis, in the county of Elisworth and State of Kansas, have invented a new and useful Musical Instrument, of which the following is a specification.

My invention relates to musical instruments of the dulcimer class, and has for its object to provide a chromatically-tuned instrument provided with a plurality of unison strings and having the intermediate or half-tone strings exposed at a different point or in a different vertical plane from the whole-tone strings comprising the C scale, whereby each may be manipulated without interference with the other, and, furthermore, to provide such an arrangement of parts as to enable the strings of contiguous degrees to be spaced apart sufficiently to adapt them to be struck by a sounder without extending the series beyond a convenient length.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of an instrument constructed in accordance with my invention and including the sounders, which are preferably employed in the manipulation of the instrument. Fig. 2 is a side view of the same, showing the dulcimer partly in section. Fig. 3 is a plan view of the dulcimer detached. Fig. 4 is a longitudinal section of the dulcimer, taken parallel with the strings, to show the arrangement of bridges and frets.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The dulcimer proper comprises a sounding-box 1, having a top sounding-board 2, provided with the usual sound-holes 3, the sides of the box being formed by blocks 4 and 5, in the former of which are driven securing pins or pegs 6 for terminally securing the strings and in the other of which are seated the tuning-pins 7. Suitable bracing-bridges 8, 9, and 10 are arranged within the sounding-box to strengthen the sounding-board.

The strings are preferably arranged in two different series, disposed, respectively, in different horizontal planes, the upper series 11 passing over a bridge 12 near one side of the sounding-board and a suitable fret 13 near the opposite side of the sounding-board, while the lower series 14 passes over a bridge 15, arranged with its upper side in a lower plane than that of the bridge 12, and under a fret 16, located near the fret 13, and under the strings of the upper series 11. All of the strings are attached at one end to the securing pins or pegs 6, which are covered by a suitable shield 17, and at the other end are wound upon the tuning-pins 7 after extending over the raised fret 13. Thus the raised bridge 12 and fret 13 support the upper series of strings above the plane that the depressed bridge 15 and fret 16 support the lower series of strings, but inasmuch as the depressed bridge 15 is spaced from the elevated bridge 12 and the strings of the upper series are carried downwardly in an inclined position through openings 18 in the sounding-board between the bridges 12 and 15 it is obvious that the strings of the lower series are exposed between the bridges 12 and 15 for manipulation. Preferably the strings of the upper series are tuned to form the major-C scale, while the intermediate or half-tones representing the sharps and flats are sounded by the strings of the depressed or lower series, which are adapted to be manipulated at their point of exposure between the bridges 12 and 15.

As shown in Fig. 3, the strings both of the upper and lower series are spaced approximately uniformly in plan, but as it is preferable to manipulate the strings by means of sounders, such as those shown in Fig. 1 at 19, it is necessary in order to facilitate the sounding of the strings belonging to a particular degree without interference with those belonging to contiguous degrees to provide spaces between the strings of contiguous degrees. These spaces are provided by depressing the strings of the intermediate or half-tone degrees, while at the same time the length of the instrument for a given number of degrees is not extended. In other words, I attain the separation of the strings of contigu-

ous degress sufficiently to facilitate the manipulation thereof by means of sounders without extending the series.

The instrument as described is adapted to be played by two performers, one operating contiguous to the bridges 12 and 15, each of which is inscribed by letters designating the degrees of the scale or the absolute pitch of the several strings, and the other operating contiguous to the depressed fret 16, which is also inscribed to indicate the different degrees of the scale. In this way the air or melody of a composition may be played by one performer contiguous to the bridge 12, where he has access to all of the degrees of the chromatic scale, while the accompaniment may be played contiguous to the opposite side of the instrument.

It will be understood, furthermore, that compositions may be played in any key, thus adapting the instrument for general use in playing either accompaniments or melodies with other instruments or with vocal performers.

In practice I prefer to arrange the dulcimer proper upon a supporting-frame consisting of a case 20, having a hinged cover 21 and supported by standards 22, a lifting-rod 23 being mounted vertically in a suitable opening in the floor of the case for engagement at its upper end with the under side of the dulcimer. This lifting-rod is pivoted at its lower end to an adjusting-lever 24, fulcrumed, as at 25, to the frame and adapted to be engaged at its free end with either of a plurality of pegs 26 and 27. When in engagement with the lower peg 26, the dulcimer is in its depressed position, (indicated in dotted lines in Fig. 2,) when it may be inclosed by lowering the cover 21, but when in use it is preferable to engage said lever with the upper peg 27, when the dulcimer is disposed in the inclined position indicated in full lines in Figs. 1 and 2.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. A musical instrument having a sounding-board provided at one side with a plurality of securing pins or pegs, an elevated bridge and an elevated fret located near opposite sides of the sounding-board, tuning-pins located contiguous to the elevated fret, a depressed bridge spaced from the elevated bridge and a depressed fret arranged contiguous to the elevated fret, strings attached at one end to said securing pins or pegs and at the other end to the tuning-pins and arranged respectively in upper and lower series, the strings of the upper series traversing the elevated bridge and fret and the strings of the lower series traversing the depressed bridge and fret, the strings of the elevated series extending downwardly through openings in the sounding-board between the elevated bridge and the depressed bridge, to expose the contiguous portions of the strings of the depressed series, said strings of the depressed series extending through openings in the elevated bridge, substantially as specified.

2. In a musical instrument, the combination with a supporting-frame having a case, of a dulcimer arranged within the case, a lifting-rod arranged to operate through an opening in the bottom of the case, an operating-lever connected to said lifting-rod and adapted to actuate the latter to elevate or depress the rear side of the cithern, and means for securing the lever in its elevated and depressed positions, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JESSE MERRILL.

Witnesses:
E. E. MARSHALL,
GEO. L. LEVITT.