

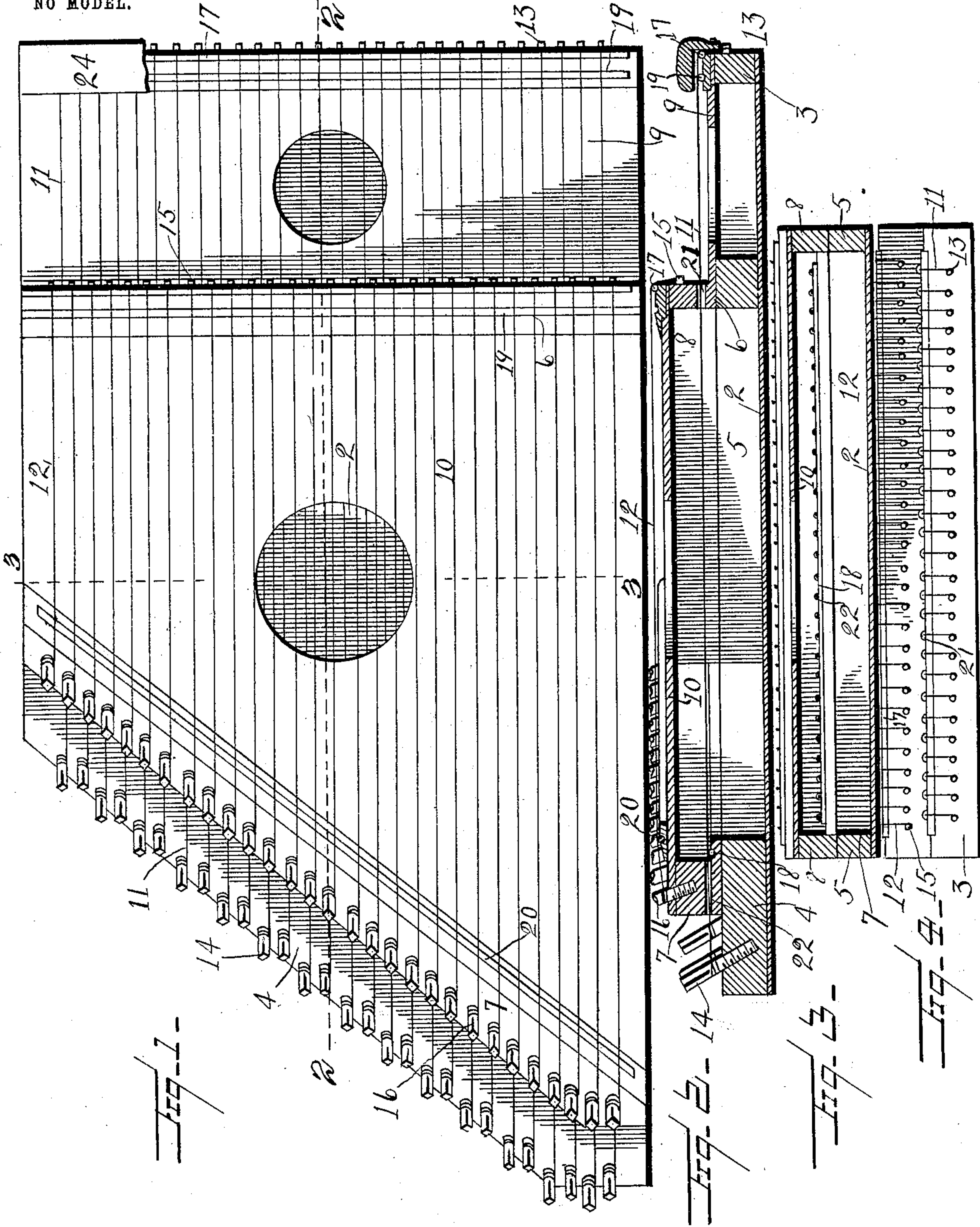
No. 760,288.

PATENTED MAY 17, 1904.

R. A. WILKINS.
MUSICAL INSTRUMENT.

APPLICATION FILED JAN. 27, 1904.

NO MODEL.



WITNESSES:

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MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 760,288, dated May 17, 1904.

Application filed January 27, 1904. Serial No. 190,826. (No model.)

To all whom it may concern:

Be it known that I, ROY A. WILKINS, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Musical Instrument, of which the following is a specification.

My invention relates to stringed instruments of the zither type, and has for its object to improve the tone and appearance of the instrument, to increase its compass without unduly increasing its size, to give strength to the frame, so as to prevent warping and buckling under the tension of the strings, and to otherwise improve the instrument, as will be hereinafter pointed out.

In the drawings, wherein is illustrated the embodiment of my invention, Figure 1 is a top plan view of the instrument. Fig. 2 is a central longitudinal sectional view, and Fig. 3 is a transverse sectional view taken on the line 3 3 of Fig. 1. Fig. 4 is an elevation of the tail end of the instrument.

The body or frame of the instrument comprises the bottom or base board 2, the tail end piece 3, the pin board or strip 4 at the head end of the instrument, and the side pieces 5 5. Extending across the instrument from side to side and preferably parallel with the tailpiece 3 is a cross-piece 6, which serves as a tailpiece for a set of strings that are to be hereinafter described. This cross-piece 6 preferably rests upon the top of the side pieces 5. There is another cross-piece 7 at the head end of the instrument, preferably parallel with the head end piece 4, as close thereto as convenient, but at a higher level, being supported upon the side pieces 5 and serving as a pin-strip for the set of strings just referred to. Between these cross-pieces 6 and 7 are arranged the side pieces 8 8, which rest directly upon and over the side pieces 5. Indeed, the parts 5 and 8 may be integral, if preferred, though for convenience in construction I prefer that they should be separated, as indicated. Extending between the cross-piece 6 and the tail end of the instrument and constituting the top of the frame is a sounding-board 9, and supported upon the frame-pieces 6, 7, and 8

is another sounding-board 10, these two parts being arranged, as is clearly shown in Fig. 2, at different levels. The instrument is provided with two sets of strings 11 and 12, arranged in different horizontal planes. The strings 11 are attached at one end to pegs 13 in the tailpiece 3 and at their opposite ends to the tuning-pins 14 in the cross-piece or pin-block 4, while the strings 12 are attached, respectively, to the pins 15, inserted in the cross-strip 6 and to the tuning-pins 16 in the cross-piece or pin-block 7. The strings 11 pass over the bridges 17 at the tail end of the instrument and 18 near the head thereof, while the strings 12 are supported, respectively, by the bridges 19 and 20. The strings 11 pass through apertures 21 in the cross-piece 6, these being of a size to permit perfectly free vibration of the strings without contact with the side walls of the apertures. Near their opposite ends the strings pass through apertures 22 in the pin-block 7. As these apertures are disposed between the bridge 18 and the tuning-pins 14, it is not so important that the strings should not touch the walls of the apertures, although it is best that there should be no contact at these points also. By this arrangement it will be seen that the strings 11 pass through the body of the instrument above the sounding-board 9 and beneath the sounding-board 10. Those portions of the strings 11 that are above the sounding-board 9 are exposed for playing, as also are the strings 12.

The strings employed in the instrument may be arranged to give the tones of the chromatic scale, beginning with the lowest tone of the instrument produced by the string nearest the person of the player in the set 11 and continuing throughout that set of strings and the longest string of the set 12 giving the next higher tone above the highest tone in the set 11. This, as will be seen, gives a great range for an instrument of this character. I prefer, however, that the highest tones given by the strings of the set 11 should correspond with the lowest tones given by a certain number of the strings of the set 12, as this arrangement is found most convenient for the playing of popular music, for which instruments of

this character are especially adapted. I do not, however, wish to be limited to any particular arrangement or tuning of the strings, as those of the set 11 may be arranged in sets

5 or groups to form harmonizing chords, in which case the melody of the piece of music being rendered will be played upon the set of strings 12, while the accompaniment in chords would be played upon the set of strings 11.

10 Besides the increased range given an instrument of this character when constructed as I have described over the usual construction of a zither there are several other advantages. In the first place it may be noted

15 that the instrument is pleasing in shape and is compact, making it a convenient instrument for carrying and one easily played upon. It will also be noticed that the tuning-pins are all arranged at one end of the instrument,

20 thus facilitating the tuning of the instrument, and by carrying the strings 11 through the sound-chamber of the instrument a very full and pleasing tone is produced.

Great difficulty has heretofore been experienced in making the frame of an instrument

25 of the character of mine sufficiently rigid to withstand the tension put upon the frame by the strings when properly tuned, and this difficulty has rapidly increased as the number of strings is multiplied. By constructing the

30 frame as shown herein I have so strengthened it as to enable me to nearly double the number of strings employed as compared with the ordinary zither instrument and at the same

35 time to more than double the strength of the frame, so that my instrument will remain in tune longer than the ordinary instrument, and this is accomplished without unduly increasing the size or weight of the instrument. Another advantage incident to the arranging of

40 the strings as described—that is, in two horizontal planes separated by the sounding-board—is this: It permits the use of a note-playing sheet or chart in connection with each

45 set of strings, the sounding-boards 9 and 10 serving as supports for the charts and keeping them independent of each other and each adjacent to the set of strings for which it is adapted.

50 The bridges 17 and 19 may preferably be covered each with a guard or shield 24 to improve the appearance of the instrument and also to serve as rests for the hands of the player. These parts, however, are not essential and may be omitted, if desired.

55 It will be observed that the upper bank or set of strings 12 and the frame therefor are arranged intermediate the ends of the lower bank or set of strings and its frame. This

60 not only makes a compact and rigid instrument, as has been explained, but also exposes the ends of both sets of strings, so that should a string become broken in either set it may be easily replaced and tuned without neces-

65 sitating the working between any of the

strings, and it also permits the disposition of all of the tuning-pins at one end of the instrument.

What I claim is—

1. In an instrument of the zither class, the combination of two sets of strings arranged in different horizontal planes one above the other, one set of strings being arranged intermediate the ends of the other set of strings, bridges over which the strings pass and the

75 tuning-pins for the two sets of strings, such pins being arranged at one end of the instrument, substantially as set forth.

2. In a musical instrument of the zither class, the combination of a frame constructed to

80 form, with the sounding-board, a sound-chamber, the sounding-board covering the said sound-chamber, the playing-strings, the tone-producing parts of which extend throughout a portion of their length through the sound-

85 chamber, and the supports for the ends of the strings arranged outside of the said sound-chamber, substantially as set forth.

3. In a musical instrument of the zither class, the combination of the frame constructed to

90 have a sound-chamber, and a sounding-board arranged intermediate the ends of the zither and covering the sound-chamber and two sets of playing-strings, one set arranged above the sounding-board and the other set arranged in

95 a different plane and extending throughout a portion of their extent below the sounding-board and through the sound-chamber covered thereby, substantially as set forth.

4. In a musical instrument of the zither class,

100 the combination of a frame having two sounding-boards 9 10 arranged in different planes, and the lower sounding-board, 9, extending longitudinally in one direction beyond the upper sounding-board, a set of strings extending

105 over the sounding-board 10, and another set of strings extending below the sounding-board 10 and over the sounding-board 9 where the strings are exposed for playing, substantially as set forth.

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5. In a musical instrument of the zither class, the combination of a frame constructed to form a sound-chamber, and having a sounding-board 9 near one end of the frame and a sounding-board 10 near the other end thereof and

115 at a higher level, the sounding-board, 9, extending longitudinally beyond the sounding-board 10, a set of playing-strings extending over the sounding-board 9 and through the sound-chamber beneath the sounding-

120 board 10, and another set of exposed playing-strings extending over the sounding-board 10, substantially as set forth.

6. In a musical instrument of the zither class, the combination of a frame provided with the

125 cross-pieces 6 and 7, apertures for the passage of strings, a sounding-board arranged in a plane lower than the said cross-pieces, another sounding-board arranged in a plane above the said cross-pieces, a set of strings supported

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from the said cross-pieces, and another set of strings arranged in a lower plane extending through the apertures in the said cross-pieces, substantially as set forth.

- 5 7. In an instrument of the class described, the combination of a frame, a sounding-board, the sound-chamber of the instrument being formed by the bottom and sides of the frame and the sounding-board, the latter forming a
10 top for the chamber, strings arranged to pass entirely through the said chamber and below the sounding-board, and tuning-pins and pegs for the strings arranged outside the said sound-chamber, substantially as set forth.

8. In a musical instrument of the zither class, 15 the combination with a frame provided with two sound-chambers arranged longitudinally of the frame, sounding-boards, one for each sound-chamber, a cross-piece arranged to separate the sound-chambers, and two sets of 20 strings, one set for each sound-chamber arranged to pass over its respective sounding-board, substantially as set forth.

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