(No Model.)

W. I. HOBILL.

STRINGED MUSICAL INSTRUMENT.

No. 455,329. Patented July 7, 1891.

FIG. I.

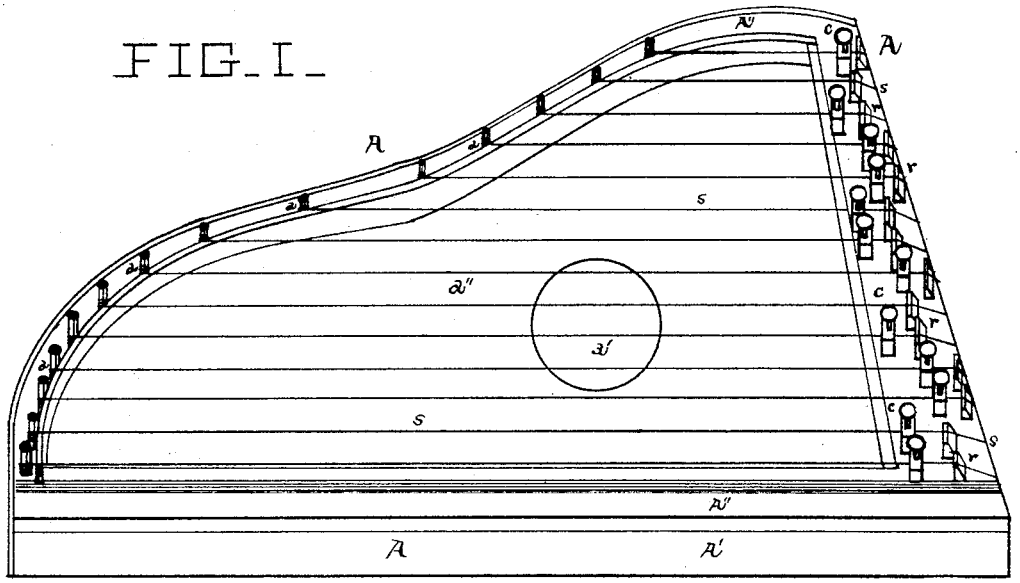


FIG. II.

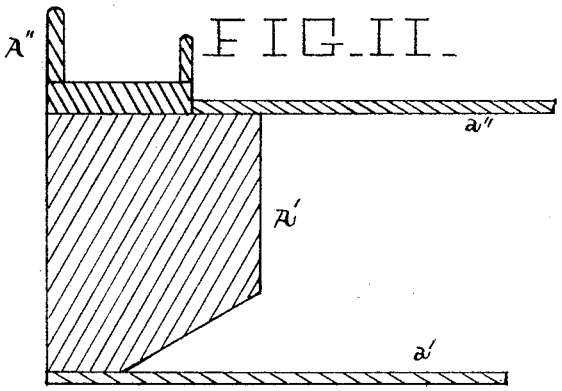
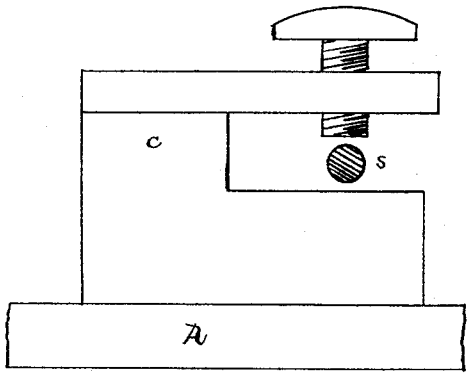


FIG. III.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM I. HOBILL, OF ELYRIA, OHIO.

STRINGED MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 455,329, dated July 7, 1891.

Application filed January 19, 1891. Serial No. 378,183. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM I. HOBILL, a citizen of the United States, residing at Elyria, in the county of Lorain and State of Ohio, have invented a new and useful Musical Instrument, of which the following is a specification.

My invention relates to an improvement in stringed musical instruments wherein the strings are vibrated by means of the tips of the fingers.

The object of my invention is, first, to provide such an instrument that can be played in any desired key without changing the tension of the strings by means of the keys; second, that is so constructed as to permit the strings being under great tension, and thereby improve the volume and quality of tone over such instruments as ordinarily constructed. I attain these objects by means of the mechanism illustrated in the accompanying drawings, in which—

Figure I is a perspective view of my instrument. Fig. II is a sectional view of a part of one end, showing the construction of the frame; and Fig. III is an enlarged view of one of my stops hereinafter described.

Similar letters refer to similar parts throughout the several views.

I represent the frame of my instrument by A. This frame is preferably in two parts, which extend around and form the outside edges of the instrument, and which are harp-shaped. The lower part I prefer to make of wood, and a section of same is shown in Fig. II, marked A′, which shows the inside lower corner cut back. The upper part of said frame I prefer to make of iron and with ribs extending upward on the diagonal curved portion of same, as shown in Fig. II, A″. At suitable points along this diagonal and curved portion of said frame are placed keys *a*, to which are attached the strings *s* of said instrument. Said keys are so constructed as to be turned and the strings wound up on same, whereby any desired tension may be obtained on the strings of said instrument. To the upper face of said wooden frame is attached the iron part of said frame. The lower side of said wooden frame has a sounding-board *a′* entirely covering same, and the upper part of said wooden frame has also a sounding-board *a″* provided, covering the upper part of said frame, with an opening near the center. On the straight end of said frame at suitable distances are secured one end of the strings *s*. These strings pass over bridges or rests *r*, located at proper points on the straight end of said frame to give the desired tone when the string is vibrated under proper tension. In addition to said bridges or rests *r*, and located in the line of said strings and at a proper distance from said rests, are placed stops *c*, so located and constructed that by closing same contact will be made with said string and the tone of said string changed half a note without changing the quality of the tone.

In Fig. III, I illustrate one of my stops in detail, where it will be readily seen that by turning the screw down against the string *s* far enough the string will be firmly impinged between the lower part of the opening in said stop and the lower end of the screw, by means of which the vibrations of said string will be cut off at this point and the portion subject to vibration shortened and the tone thereby raised. The releasing of said string by freeing same from the embrace of said stop will increase the length of the portion of said string subject to vibration, and consequently lower the note of said string, all of which is done without changing the tension of said string or quality of its tone.

I preferably construct my instrument with four rests or bridges and three stops to an octave on a general central line, and in such a manner that when all these central stops are applied and the others left open the strings when properly tuned will be in the key of C. Then the same can be changed to the key of G by applying one stop on the F-string in each octave, and thereby making it sharp. Said strings can be changed to any other desired key by applying or releasing said stops without changing the tension of said strings or quality of tone. Therefore, when the strings of said instrument are properly tuned any desired key not exceeding three sharps or three flats can be played on the instrument, as illustrated in drawings, without changing the tension of said strings.

If it is desired to play a tune with a greater number of flats or sharps, an instrument with additional stops can be used.

By means of the construction of my frame with the lower inner corner cut away I can make said frame of great strength and sufficient to withstand any desired strain of the strings and still permit a much larger vibrating-surface to the lower sounding-board than if said frame were not so cut away, thereby greatly adding to the volume and quality of tone.

Having fully described my invention, what I claim as new, and desire to obtain by Letters Patent of the United States, is—

1. In a harp-shaped stringed musical instrument, and in combination with one end of the frame to which the strings are attached, a series of bridges or stops *c*, keys *r*, and strings *s*, whereby the vibrating portion of the strings may be lengthened or shortened a half tone and the key of said instrument changed.

2. In a stringed musical instrument, the frame A, with the lower inside edge beveled off, in combination with the sounding-board *a'*, all as above set forth, and substantially as described.

WILLIAM I. HOBILL.

Witnesses:
E. C. MANTER,
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