

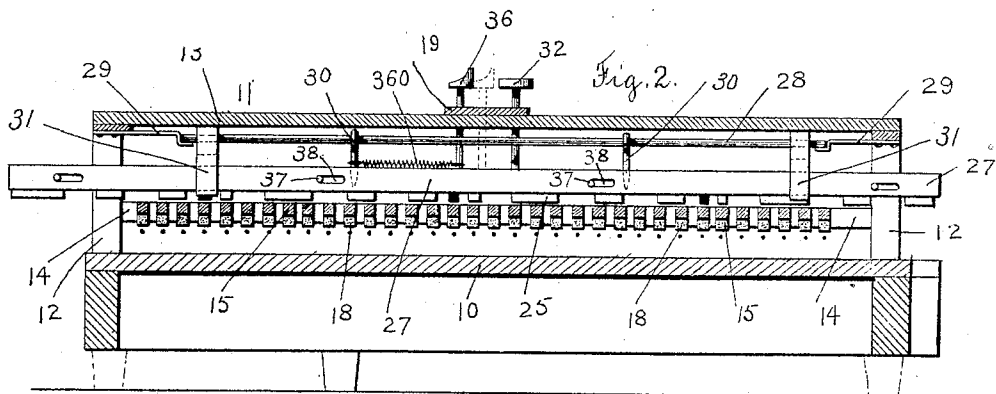
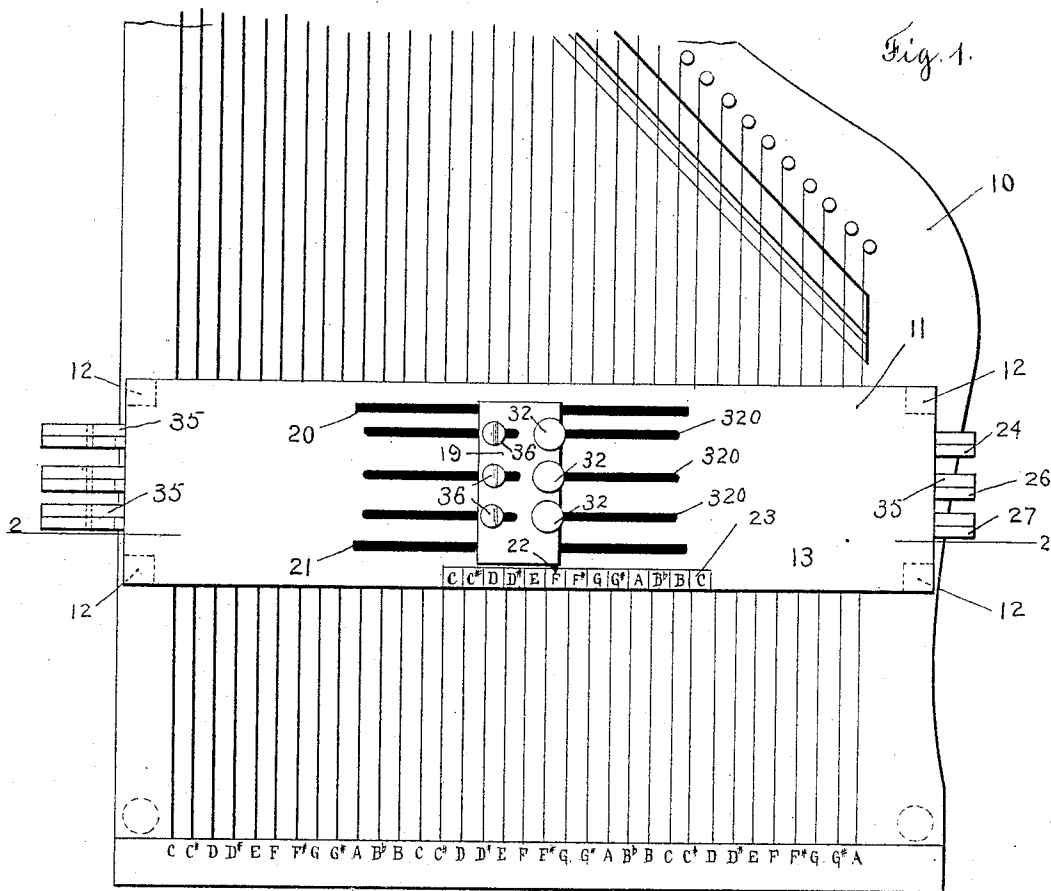
(No Model.)

W. E. WHITCOMB.
HARP.

2 Sheets—Sheet 1.

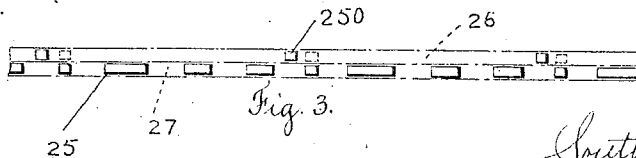
No. 570,242.

Patented Oct. 27, 1896.



Witnesses.

Chas. A. Smith
E. M. Realy



Inventor.

W. E. Whitcomb,

By
Southgate & Southgate
Attorneys

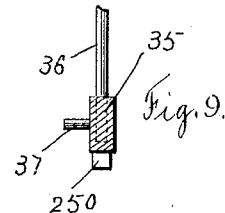
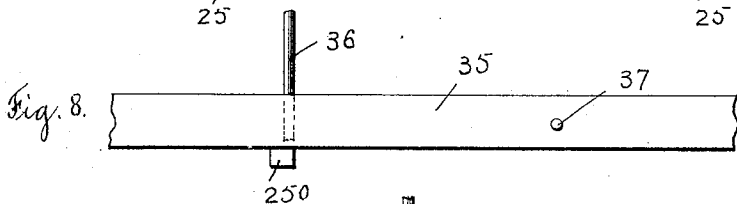
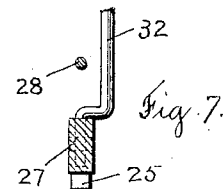
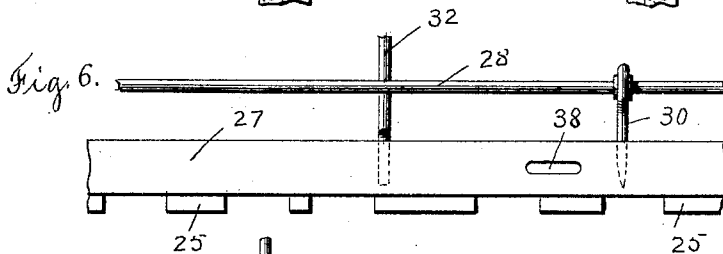
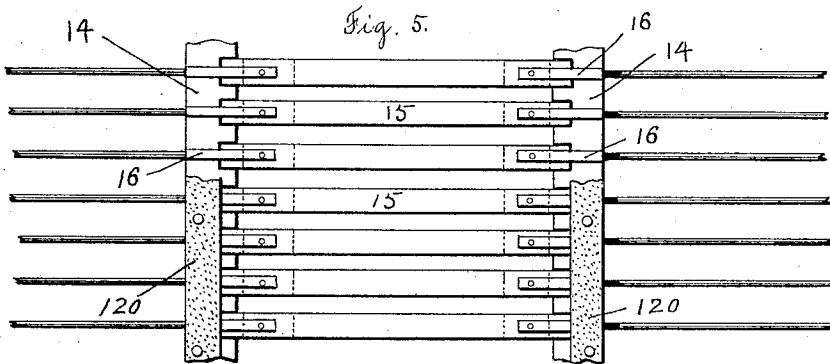
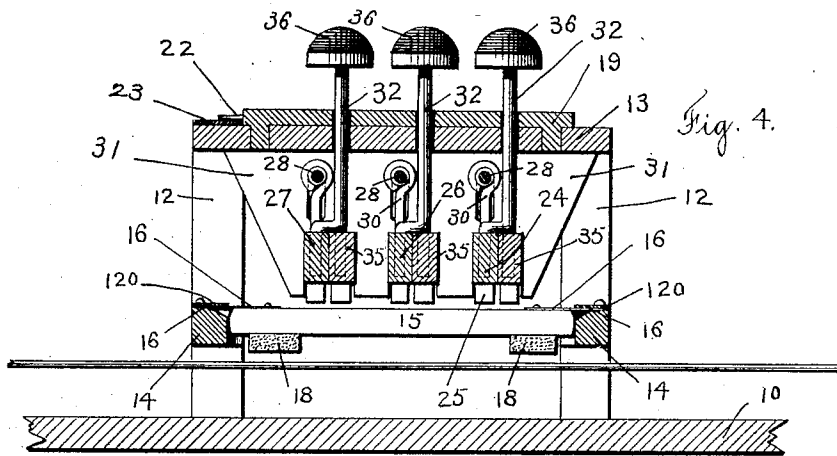
(No Model.)

2 Sheets—Sheet 2.

W. E. WHITCOMB.
HARP.

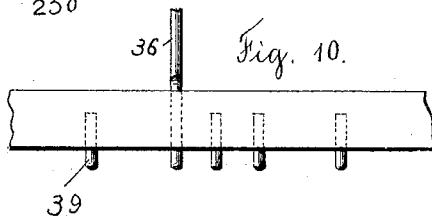
No. 570,242.

Patented Oct. 27, 1896.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIS E. WHITCOMB, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO
GRACE L. TANNER AND RUFUS P. WHITCOMB, JR., OF SAME PLACE.

HARP.

SPECIFICATION forming part of Letters Patent No. 570,242, dated October 27, 1896.

Application filed April 17, 1896. Serial No. 587,977. (No model.)

To all whom it may concern:

Be it known that I, WILLIS E. WHITCOMB, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Harps, of which the following is a specification.

The object of my invention is to provide a harp or a similar stringed instrument with simple and efficient means for muffling or damping those strings which do not enter into the various chords which it is desired to produce.

To these ends my invention consists of the parts and combinations of parts as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying two sheets of drawings, Figure 1 is a plan view of a harp constructed according to my invention. Fig. 2 is a sectional view of the same, taken on the line 2 2 of Fig. 1. Fig. 3 is a detail view illustrating the operation of one of the modifying-slides. Fig. 4 is an enlarged sectional view of the frame or table. Fig. 5 is a partial plan view illustrating the form of damper which I preferably employ. Figs. 6 to 9, inclusive, are detail views of one of the depressible bars and its modifying-slide, and Fig. 10 is a detail view illustrating a modified form of construction.

A harp or musical instrument constructed according to my invention comprises a frame or table extending over the strings of the instrument, a sliding carriage mounted in said frame, and a plurality of independently-depressible bars carried by said carriage.

Referring to the drawings and in detail, 10 designates the base or sounding-board of the harp, which is provided with a series of strings in the ordinary manner. A frame or table 11 is fastened upon the sounding-board 10 and extends over the strings of the instrument. As illustrated, the frame or table 11 comprises supports or legs 12 and a top plate 13. Fastened to the legs 12 are two notched side pieces 14, which extend transversely over the strings. A series of spring-pressed normally open dampers are mounted in the cross-pieces 14, one damper being provided for each

string of the instrument. As most clearly illustrated in Figs. 4 and 5, these dampers are formed by pieces 15, which fit into notches in the side pieces 14, and are provided at their ends with light springs 16, resting on top of the side pieces 14. Upon their under side the pieces 15 are provided with mufflers or felts 18 for engaging the strings. As thus constructed the normally open dampers are held in place by means of leather or felt strips 120, tacked onto the pieces 14, as illustrated in Fig. 5.

To operate the normally open dampers, I provide a series of independently-depressible bars. These bars are carried by a carriage and may be shifted longitudinally and brought into positions corresponding with different musical keys. As illustrated, the carriage 19 is mounted on the top plate 13 of the frame, and is provided with lugs or projections which fit into guide-slots 20 and 21. Near its front the carriage 19 is provided with an indicator 22, which coöperates with a scale 23, indicating the different keys to which the instrument may be set. The depressible bars 24, 26, and 27 are arranged in vertical slots in the guide-pieces 31, extending down from the top plate 13 of the frame.

Movably mounted in the frame or table 11, below the top plate 13, are guide-rods 28, which are supported at their opposite ends by springs 29. The depressible bars are provided with screw-eyes or wires 30, which fit over and engage the guide-rods 28. Extending up from each of the depressible bars is a key or finger-piece 32, each of which extends up through a slot 320 in the top plate 13. By means of this construction it will be seen that the depressible bars may be shifted longitudinally by means of the movable carriage 19, and that the bars may be independently depressed by means of the keys or finger-pieces 32.

Along their lower edges the depressible bars 24, 26, and 27 are provided with blocks or abutments 25, which are spaced or arranged so as to actuate certain ones of the normally open dampers and to muffle or cut out all of the strings of the instrument which do not enter into the chord which it is desired to produce.

In the drawings I have illustrated an instrument having three independently-depressible bars. It is obvious, however, that the number of the depressible bars can be varied or changed, as desired.

In order to modify or change from a major into a minor chord, each of the depressible bars is preferably provided with a modifying slide or bar which is movably connected thereto.

As illustrated in Figs. 6 to 9, inclusive, the modifying-slides 35 are provided with pins or studs 37, which engage with slots 38 in the independently-depressible bars. The modifying-slides 35 are provided on their lower edge with abutments 250, cooperating with certain dampers. The modifying-slides 35 are held in their normal position by means of light springs 360, and may be shifted or moved to produce a minor chord by means of keys or finger-pieces 36, which extend up through slots in the carriage 19.

In some cases, instead of having the depressible bars engage with and cooperate with a series of normally open dampers, the bars can be provided with felts or dampers to directly engage with the strings of the instrument. I prefer, however, to employ an independent damper for each string, as I have found in practice that by means of this construction the strings will be more uniformly damped or muffled and more accurate chords and melodies will be produced. Moreover, by arranging the abutments on the independently-depressible bars to cooperate with strips 15, which are of considerable width, rather than to have said abutments engage directly with the strings themselves, it will be seen that accurate chords will be produced even when the carriage 19 does not correspond exactly with the desired key.

In some cases, instead of employing blocks to form the abutments on the independently-depressible bars, I may employ pins or projections 39, as illustrated in Fig. 10.

I am aware that other changes may be made in the construction of harps by those who are skilled in the art without departing from the scope of my invention as expressed in the claims. I do not wish, therefore, to be limited to the form which I have shown and described; but

What I do claim, and desire to secure by Letters Patent of the United States, is—

1. In a stringed instrument, the combination of a frame or table, comprising supporting-legs, and a cover or top plate, a carriage engaging grooves in said top plate, and a plurality of independently-depressible bars

carried by the carriage, substantially as described.

2. In a stringed instrument, the combination of a frame, guide-rods mounted in said frame, and independently-depressible, longitudinally-movable bars mounted on said guide-rods, substantially as described.

3. In a stringed instrument, the combination of a frame, spring-supported guide-rods mounted in the frame, independently-depressible, longitudinally-movable bars mounted on said guide-rods, and means for shifting said bars simultaneously, substantially as described.

4. In a stringed instrument, the combination of a frame, a sliding carriage, spring-supported guide-rods mounted in the frame, and independently-depressible bars mounted on said guide-rods and carried by said carriage, substantially as described.

5. In a stringed instrument, the combination of independent, normally open dampers, and a plurality of independently-depressible bars for moving a portion of said dampers into engagement with the strings, said bars being arranged so that they can be shifted longitudinally to produce chords in different musical keys, substantially as described.

6. The combination of a frame extending over the strings of the instrument, a sliding carriage mounted in said frame, a series of normally open dampers, and a plurality of independently-depressible bars carried by the carriage and arranged to move a portion of the dampers into engagement with the strings, substantially as described.

7. In a stringed instrument, the combination of a frame, a series of normally open dampers, guide-rods mounted in said frame, and independently-depressible bars mounted upon said guide-rods and arranged to move a portion of the dampers into engagement with the strings, substantially as described.

8. In a stringed instrument, the combination of a frame, a series of normally open dampers, a sliding carriage, spring-supported guide-rods mounted in the frame, and independently-depressible bars mounted on said guide-rods and arranged to move a portion of the dampers into engagement with the strings, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIS E. WHITCOMB.

Witnesses:

PHILIP W. SOUTHGATE,
E. M. HEALY.