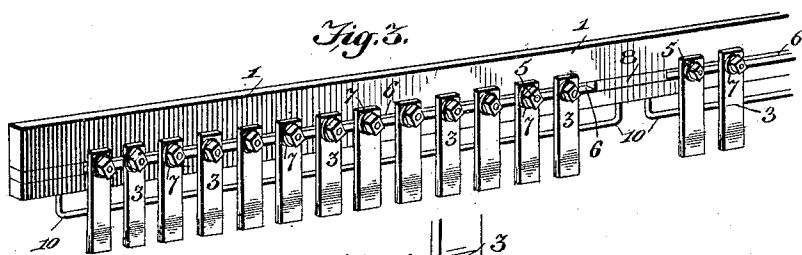
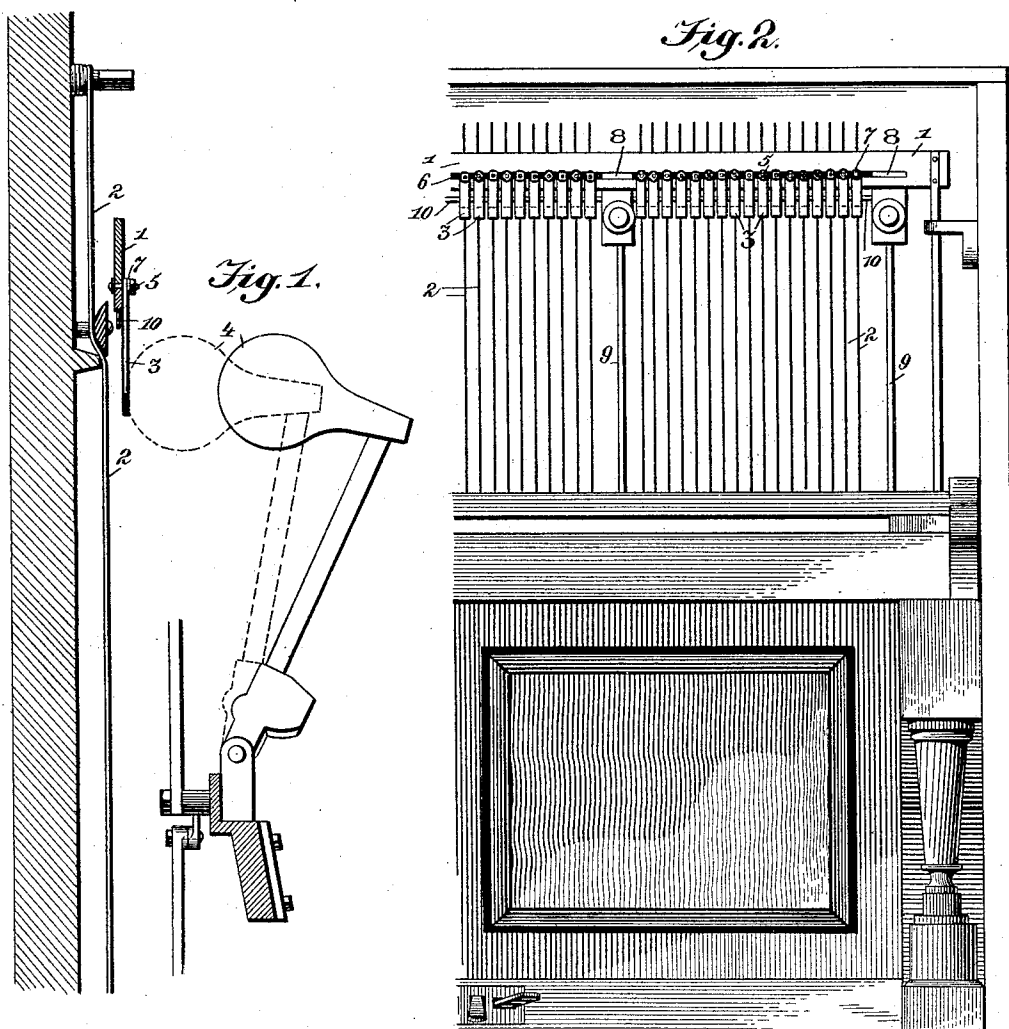


(No Model.)

J. H. MOYER.
PIANO ATTACHMENT.

No. 573,474.

Patented Dec. 22, 1896.



Witnesses

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UNITED STATES PATENT OFFICE.

JESSE HECHLER MOYER, OF TEMPLE, TEXAS.

PIANO ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 573,474, dated December 22, 1896.

Application filed May 29, 1896. Serial No. 593,615. (No model.)

To all whom it may concern:

Be it known that I, JESSE HECHLER MOYER, a citizen of the United States, residing at Temple, in the county of Bell and State of Texas, have invented a new and useful Piano Attachment, of which the following is a specification.

My invention relates to an attachment for upright pianos designed to produce a harp, 10 mandolin, or cithern tone, and the object in view is to provide an attachment having an improved construction of strikers, whereby the tone is slightly softened without depriving it of its metallic ring, and whereby the 15 impact of the striker is positive and uniform for all of the unison strings encountered, thereby to avoid the rebound common to those strikers upon which the head or face consists of a metallic block or strip or transversely- 20 elongated object attached to the extremity of the tongue; to provide means for attaching the tongues of the strikers to a tongue-bar, whereby they are capable of adjustment to suit the scale of the instrument to which the 25 attachment is to be applied, and to provide means for securing angular adjustment of the tongues to suit the inclination of the strings in the different registers of the piano.

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 30 claims.

In the drawings, Figure 1 is a partial vertical section of a piano-action, including an attachment, constructed in accordance with my invention. Fig. 2 is a partial front view of the same. Fig. 3 is a detail view in perspective of a portion of the device detached. 40 Fig. 4 is a detail view of one of the tongues detached.

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

1 designates a tongue-bar which is adapted to be arranged within a piano contiguous to the plane of the strings 2 to carry flexible 45 tongues 3 for arrangement in the paths of the hammers 4 of the instrument, whereby when in use the device causes the production of a 50 metallic tone instead of the usual soft tone produced by the impact of felted or clothed hammers.

The scales or intervals between the strings of different pianos vary according to the make, 55 and hence attachments having the general functions above described have heretofore been constructed with special reference to the instruments upon which they are to be used, in order to secure correspondence between 60 the spacing of the tongues and the intervals between the strings. Hence, except when an attachment of this class is applied to an instrument when manufactured, the adaptation of an attachment to an instrument involves 65 the preparation of a plan showing the spacing of the strings. In order to avoid this inconvenience, I provide adjustable means for securing the tongues to the tongue-bar, and in the construction illustrated in the draw- 70 ings said means consist of an independent securing device for each tongue, as, for instance, a bolt 5, engaging a round opening in the tongue and extending through a slot 6 in the bar. When the nut with which said bolt 75 is fitted is loosened, the tongue may be adjusted longitudinally of the bar, and those tongues which are to coöperate with inclined strings may be disposed at an angle. Washers or pressure-plates 7 are preferably ar- 80 ranged in contact with the tongues to span the slot and receive the pressure of said nuts. Hence an attachment constructed in accordance with my invention may be applied to a piano by an unskilled person irrespective of 85 the scale of that piano, the adjustment of the tongues being accomplished simply by the successive loosening of the securing devices and the movement of the tongues to such positions as will bring their free or lower ex- 90 tremities into operative relation with the strings to be struck. Spacing-blocks 8 are preferably arranged at intervals in the slot to maintain the latter at a uniform width, said blocks being preferably arranged con- 95 tiguous to the usual braces 9 of the instrument, and in practice these spacing-blocks will be secured in place by glue or other means subsequent to the application of the attachment to the instrument, in order that 100 said blocks may be disposed with respect to the braces.

In order to insure the immediate movement of the strikers from the wires and prevent the same from being caught between the 105 strings, I employ a stop-rod 10, arranged par-

allel with and depending from the tongue-bar in rear of the tongues, and in the construction illustrated said stop-rod consists of a spring-wire formed in sections to correspond with the lower, intermediate, and upper registers of the instrument, each section having upturned extremities attached to the bar.

In devices of this class the construction of the head or face of the striker is of vital importance, owing to the fact that upon this feature depends the character of the tone to be produced. I have found in practice that devices of this class heretofore constructed have been open to the objections, first, when a metallic face is employed, of producing a tone having a disagreeable ring, and, second, when the metallic face is covered or clothed, of rebounding too quickly from the strings and not being so balanced as to strike all of the unison strings uniformly. The reason for the latter objection resides in the fact that a head consisting of a short rod or tube, of a length equal to the width of a tongue, is inclosed in a sheath formed by folding the extremity of the tongue upon itself, and therefore the weight of the head is wholly at the extremity of the tongue, and a sharp blow of the operating-hammer is liable to deflect the head and cause it to approach the unison strings in an inclined rather than a directly-perpendicular direction. In order to overcome this objection, I employ a flat rectangular strip or plate, which is inserted in a kerf formed by bifurcating the lower extremity of the tongue transversely, as shown clearly in Fig. 4. In other words, the extremity of the tongue is split in the plane of its side surfaces and between the same, and the flat plate forming the head or weight of the striker is introduced between the sides of the bifurcation and is secured in place by means of glue or its equivalent, whereby the side and lower edges of the head or weight are exposed. Thus both of the flat surfaces of the head or weight are covered or clothed for contact, respectively, with the strings and with the hammer, and in addition to softening the tone the shape of the head arranges the center of gravity of the same at such a distance above the extremity of the tongue as to avoid the objectionable twisting above mentioned.

A further advantage of this construction of striker resides in the fact that, inasmuch as the side and lower edges of the head or weight are exposed, the metallic portion of the striker is free to vibrate after having struck the strings, and thus produce the desired volume of tone without the sharp impact or blow incident to the use of a head of the same weight, but of more concentrated form. In other words, the distribution of the weight accomplished by the use of a flat and comparatively thin plate with its edges exposed is preferable to a more concentrated head, such as those heretofore used.

The means for moving the tongue-bar to bring the tongues into the paths of the hammers or remove them when the ordinary tone of the instrument is desired form no part of my present invention and may be constructed in a manner similar to devices for the same purpose heretofore in use, and therefore I have deemed it unnecessary to illustrate any means for accomplishing this movement of the attachment and have shown it in the drawings as arranged in operative relation with the strings and hammers.

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. In a device of the class described, a flexible striker having a tongue which is split or bifurcated transversely at its lower extremity to form front and rear faces, and a flat rectangular metallic weight interposed between said faces and exposed at its side and lower edges, substantially as specified.

2. In a device of the class described, the combination with a tongue-bar, of tongues mounted for longitudinal adjustment upon the bar, and means for securing the tongues at the desired adjustment, substantially as specified.

3. In a device of the class described, the combination of a longitudinally-slotted tongue-bar, and tongues provided with securing devices engaging said slot and adapted to be adjusted to bring the tongues into the desired positions with relation to the strings of the instrument, substantially as specified.

4. In a device of the class described, the combination of a longitudinally-slotted tongue-bar, tongues carried by the bar, and securing-bolts engaging the tongues, respectively, and extending through the slot in the tongue-bar, whereby the tongues may be adjusted longitudinally upon the bar, substantially as specified.

5. In a device of the class described, a tongue-bar having a longitudinal slot, flexible tongues depending from the bar and provided near their upper extremities with round openings, securing-bolts extending through the slot and said openings, respectively, in the tongues, and wear-plates interposed between the tongues and the nuts for securing said bolts at the desired adjustment, whereby the tongues may be adjusted longitudinally and angularly upon the bar, 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 HECHLER MOYER.

Witnesses:

W. R. DODGE,
J. K. CAMPBELL.