(No Model.)

P. DUFFY.

PIANO ATTACHMENT.

No. 564,476. Patented July 21, 1896.

Fig. I.

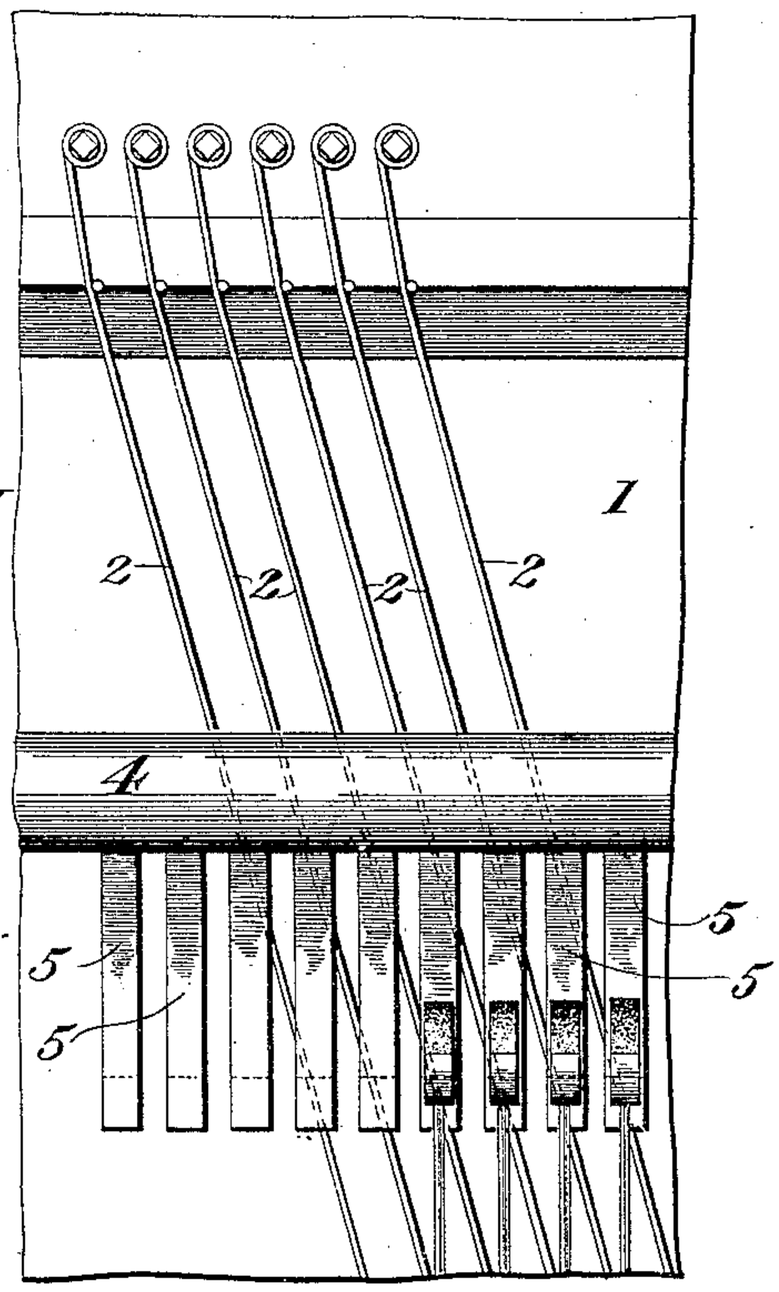


Fig. II.

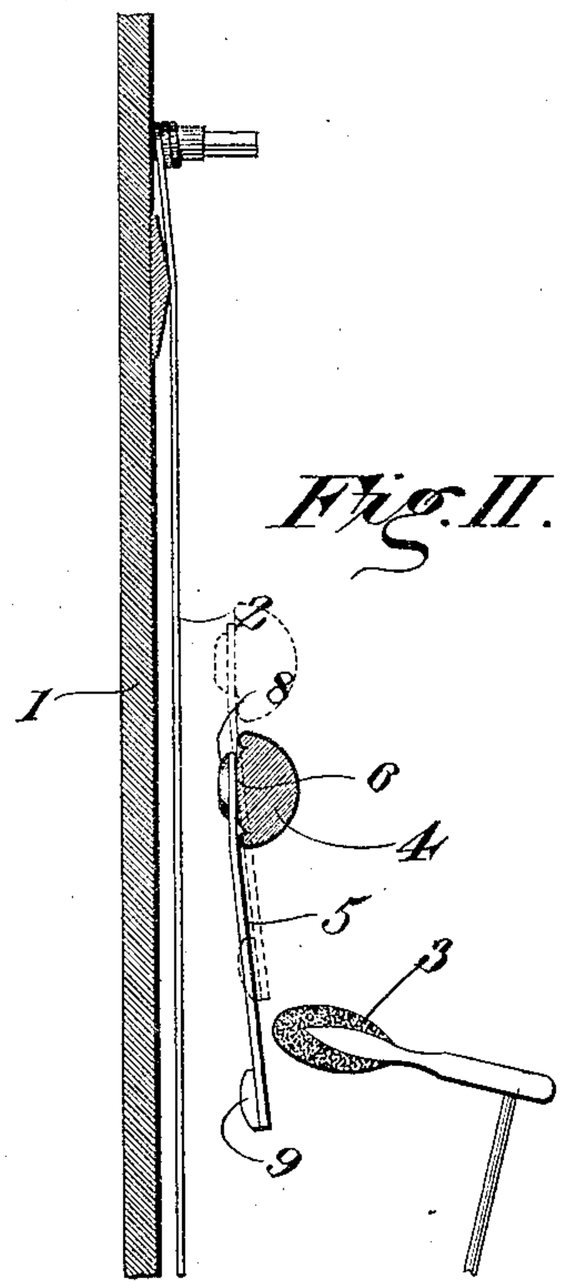


Fig. III.

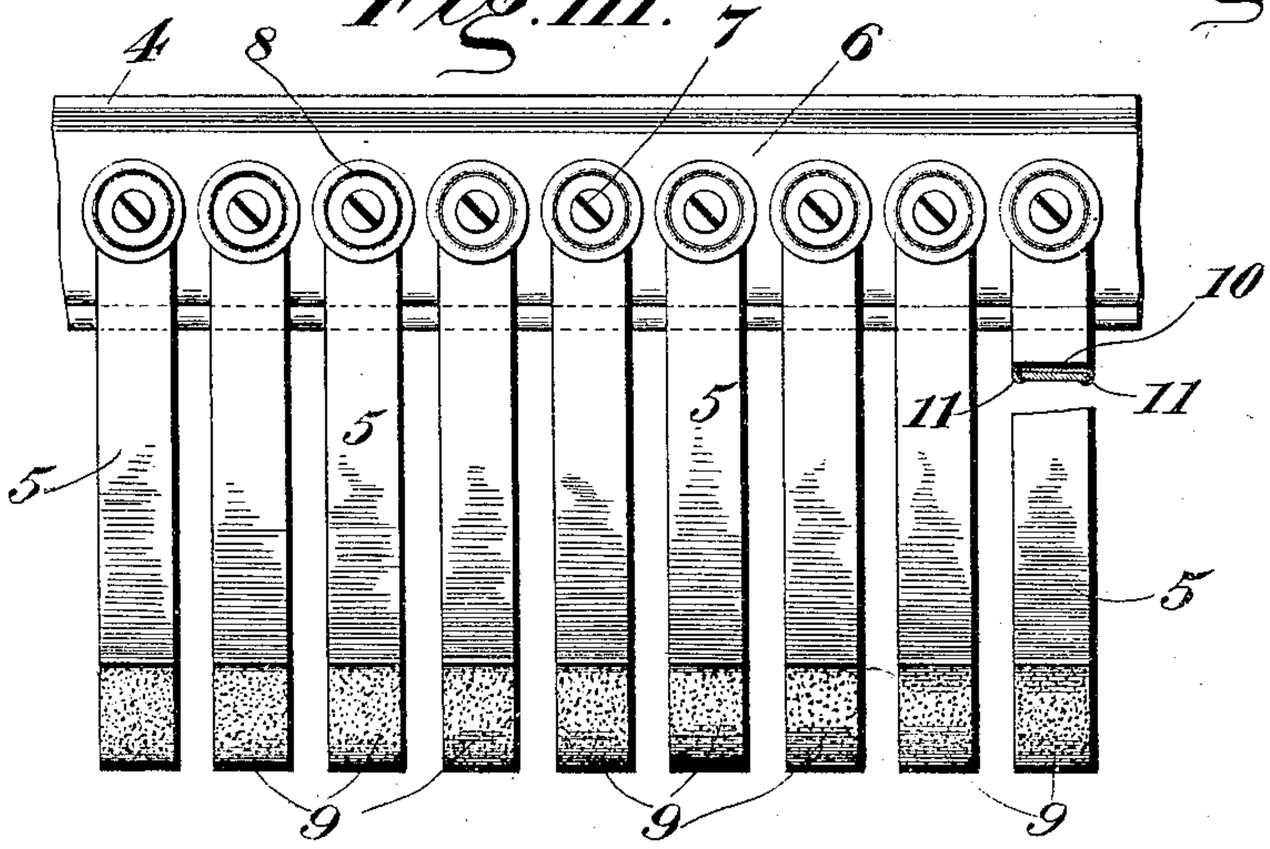
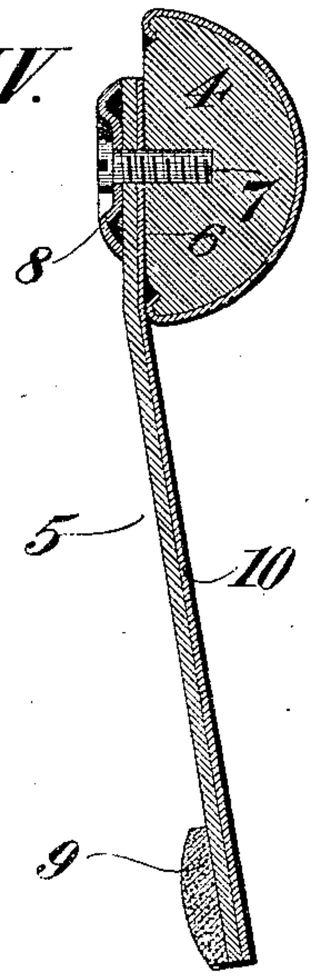


Fig. IV.



Witnesses
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PETER DUFFY, OF NEW YORK, N. Y.

PIANO ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 564,476, dated July 21, 1896.

Application filed January 14, 1896. Serial No. 575,423. (No model.)

To all whom it may concern:

Be it known that I, PETER DUFFY, of New York, county of New York, State of New York, have invented certain new and useful Improvements in Piano Attachments, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to attachments for pianos adapted to produce change of tone of the instrument in imitation of the tone of a harp, guitar, mandolin, cithern, or similar stringed instrument.

The object of my invention is to produce such an improvement in that class of attachments as will improve the responsiveness of the attachment and thereby the tone of the instrument when the attachment is in operation. Heretofore in attachments of this class a pendulous strip for each string, hanging parallel to the string itself and provided with a terminal metallic button or striker, has been employed. Such mechanism has been objectionable for several reasons. One of the reasons is the inertness of the strip which carries the striker, depending solely upon gravity to throw it in the proper position after it has performed its office under the impact of the hammer.

Another object is that lying parallel to its string it is impracticable to remove the striker-bearing strip a sufficient distance from the string to insure the best effect in the tone produced.

By my invention I avoid these objectionable features by employing a resilient strip of the preferable construction hereinafter described and claimed, and also set each strip at an angle to its wire, so that after a strip has been struck by its hammer and the hammer reacts the strip is, by its own resiliency, carried out of reach of its string, leaving the latter free to vibrate without interference from the striker-strip.

My invention comprehends the additional improvement of employing a comparatively soft striker in place of the metallic strikers heretofore used.

In the accompanying drawings I illustrate only so much of a piano as appears, in view of the state of the art, necessary to describe my attachment and its applicability to a piano.

Figure I is a front view of a part of a piano with my attachment in place and in the operative position. Fig. II is a vertical section thereof, showing in dotted lines the elevated or inactive position of my attachment. Fig. III is an inside view of the striker-strip bar. Fig. IV is a sectional view of one of the strikers and striker-strips in its preferred form.

Referring to the figures on the drawings, 1 indicates the frame of a piano, 2 the strings thereof, and 3 the hammers. Such parts being of any ordinary and usual construction are not described in detail with respect to their several relations, but are merely enumerated in order to describe their relations to my attachment.

4 indicates the striker-strip bar, which is preferably semicylindrical in cross-section, as illustrated, and which is designed to be elevated or depressed by any suitable mechanism, as, for example, ordinary pedal mechanism, which being well understood in the art is not illustrated.

The bar 4 is in practice carried outside of the strings 2 and is provided for each string or set of strings constituting a note with a resilient striker-strip 5. Each striker-strip is carried at an angle to its string, which may be accomplished by setting the plane face 6 of the bar to which the striker-strips are respectively secured at an angle to the strings, or by imparting a slight bend to the resilient material of which the strips are composed. I prefer to secure the strips to the bar by an ordinary screw 7 and a cap-piece 8, but any other means may be employed for that purpose. I also prefer to make the strips entirely separate and independent, so that strips of different resistances may be employed for the different keys, but this is not material. Upon the end of each strip I provide a striker 9. I prefer to make the strikers of cork, fiber, or other similar material, which being softer than metal produces a better tone, and being very light does not tend to interfere with making the strips of light and delicately-sensitive resilient material. These strikers may be secured to the strips by glue, or by any other suitable material.

The strip which I prefer to employ consists of a very thin sheet of copper. (See Fig. IV, indicated by the numeral 10.)

In order to slightly increase the resiliency of the copper strips, I prefer to turn or infold their edges, as indicated at 11, and for the purpose of preventing excessive vibration of the strips when they spring back I prefer to employ a damping-strip or backing 12, of paper, cloth, leather, or other suitable material, secured upon the inside of the copper strip in any suitable manner, as, for instance, by gluing them or by causing the inturned or folded edges of the metallic strip to bear against and confine them.

It is obvious that the resilient striker-strip may be employed without the flexible backing-strip and that the resilient and flexible strips may be employed without inturning the edges of the metallic strips within the scope of my invention.

What I claim is—

1. As a part of a piano attachment, the combination with a bar, of a striker-strip composed of a resilient strip, and a damping-strip secured together, substantially as set forth.

2. As a part of a piano attachment, the combination with a bar, of a resilient strip, a damping-strip secured thereto, and a striker carried upon the end of the resilient strip, substantially as specified.

3. As a part of a piano attachment, the combination with a bar, and a resilient strip having inturned edges, of a damping-strip superimposed upon the resilient strip and having its edges secured by the inturned edges of the resilient strip, substantially as specified.

In testimony of all which I have hereunto subscribed my name.

PETER DUFFY.

Witnesses:

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