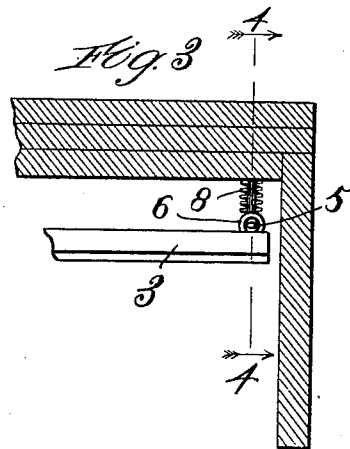
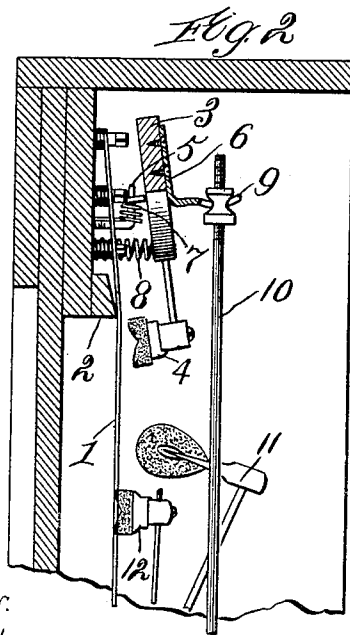
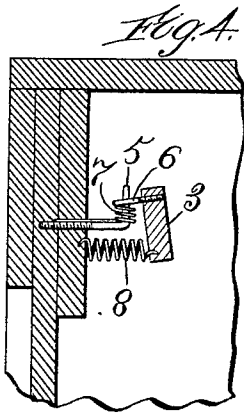
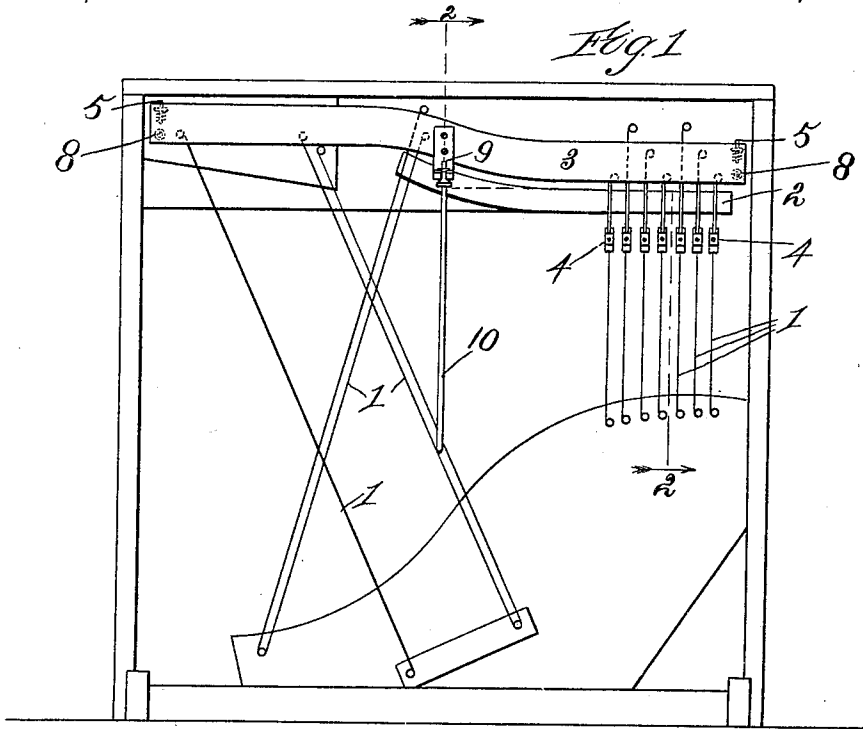


C. NALENCE.
PIANO ATTACHMENT.

No. 521,937.

Patented June 26, 1894.



Witnesses:
 Wm. M. Rheem
 Wm. A. Humming

Inventor:
Chas. Nalence
by Wm Bates Atty.

UNITED STATES PATENT OFFICE.

CHARLES NALENCE, OF CHICAGO, ILLINOIS.

PIANO ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 521,937, dated June 26, 1894.

Application filed April 11, 1894. Serial No. 507,191. (No model.)

To all whom it may concern:

Be it known that I, CHARLES NALENCE, of Chicago, Illinois, have invented certain new and useful Improvements in Piano Attachments, whereof the following is a specification.

My invention relates to attachments for softening the tone of a piano.

Its object is to give the performer some such control over the tone as a violinist exercises when he softens the tone of his violin by touching the strings with his fingers without pressing them down; also to give the tone of a guitar, mandolin, flute, &c. To this end I employ a damper or series of dampers adapted to be pressed against the strings at or near the bridge and also to be moved along the strings toward the hammers, and covered with felt or other suitable soft substance.

In carrying out my invention I provide such a damper or series of dampers and attach them to a bar extending across the strings at a suitable point, which bar I connect with a pedal so that pressure on the pedal will tilt the bar and press the dampers against the strings, and further pressure on the pedal will move the bar and dampers along the strings.

In the accompanying drawings I have shown part of an upright piano with my invention applied to it.

In the drawings—Figure 1 is a front view showing the strings and contiguous parts. Fig. 2 is a section on the line 2 of Fig. 1. Fig. 3 is a top view with the top of the piano removed; and Fig. 4 is a section on the line 4 of Fig. 3.

In the drawings—1 represents the strings; and 2 the bridge over which they are stretched.

3 is a bar extending across the strings a little above the bridge, provided with a series of dampers 4 connected to it in any suitable manner. A convenient way of connecting the bar 3 to the frame of the piano consists of hooks 5 attached to the piano frame and eyes 6 on the bar. Around each hook is a spring 7 bearing against the under side of the eye 6 and thereby holding the bar 3 up. Springs 8 are arranged between the bar and the frame of the piano, so as to press the lower edge of the bar outward and thereby hold the dampers 4 out of contact with the strings.

9 indicates an arm attached to the bar 3, and serving for the connection of a rod 10 which leads to the pedal that controls the device. I have not thought it necessary to show the pedal, as it may be of any well known form.

11 shows the usual hammer, and 12 the usual damper, which it is unnecessary to describe.

In operation, if it were desired to soften the tone the operator presses on the pedal, thereby pulling down on rod 10 and tilting the bar 3, thus bringing the dampers 4 against the strings close to the bridge. To soften or dampen the tone still further the operator presses harder on the pedal and the dampers 4 are moved along the springs away from the bridge and toward the hammers. Upon releasing the pressure on the pedal the bar is returned to its first position, as shown in Fig. 2, by the springs 7 and 8. These springs are so adjusted with relation to each other that the first pressure on the pedal will tilt the bar, thus overcoming spring 8, and a further pressure will move it downward, overcoming spring 7. It is important, to secure the best results, that the dampers 4 act upon the strings close to the bridge, as otherwise they would simply deaden the tone and act as a mute.

It is obvious that these devices may be modified in many ways without departing from my invention.

What I claim is—

1. In a piano attachment, one or more dampers of felt or other soft substance, adapted to be pressed against the strings at the bridge and to be moved along the strings in contact with them, substantially as set forth.

2. In a piano attachment, in combination with a pedal, a series of dampers operated thereby and adapted to be pressed against the strings at the bridge by a pressure on the pedal and to be moved along the strings by a further pressure on the pedal, and one or more springs for returning them to their normal position, substantially as set forth.

3. In a piano attachment, the combination, substantially as set forth, of a bar extending across the strings and connected with a pedal,

a series of dampers supported by said bar and adapted by the tilting of said bar to be pressed against the strings at the bridge and to be moved along the same by successive pressures on the pedal, one or more springs to resist the tilting of the bar, and one or more springs to resist the motion of the bar along the strings.

4. In a piano attachment, the combination, substantially as described, of a tilting bar extending across the strings and provided with an arm 9 connected to a pedal for operating

the same, hooks 5 secured to the piano frame, eyes 6 on the bar engaging said hooks, springs 7 resisting the downward motion of the bar, 15 springs 8 resisting the tilting of the bar, and dampers 4 carried by the bar and adapted to be pressed against the strings by the tilting of the bar and to be moved along the strings by the downward motion of the bar.

CHARLES NALENCE.

Witnesses:

JOHN L. JACKSON,
WM. S. BATES.