M. W. HANCHETT.

Piano-Forte Attachments.

No. 153,766. Patented Aug. 4, 1874.

Fig. 1.

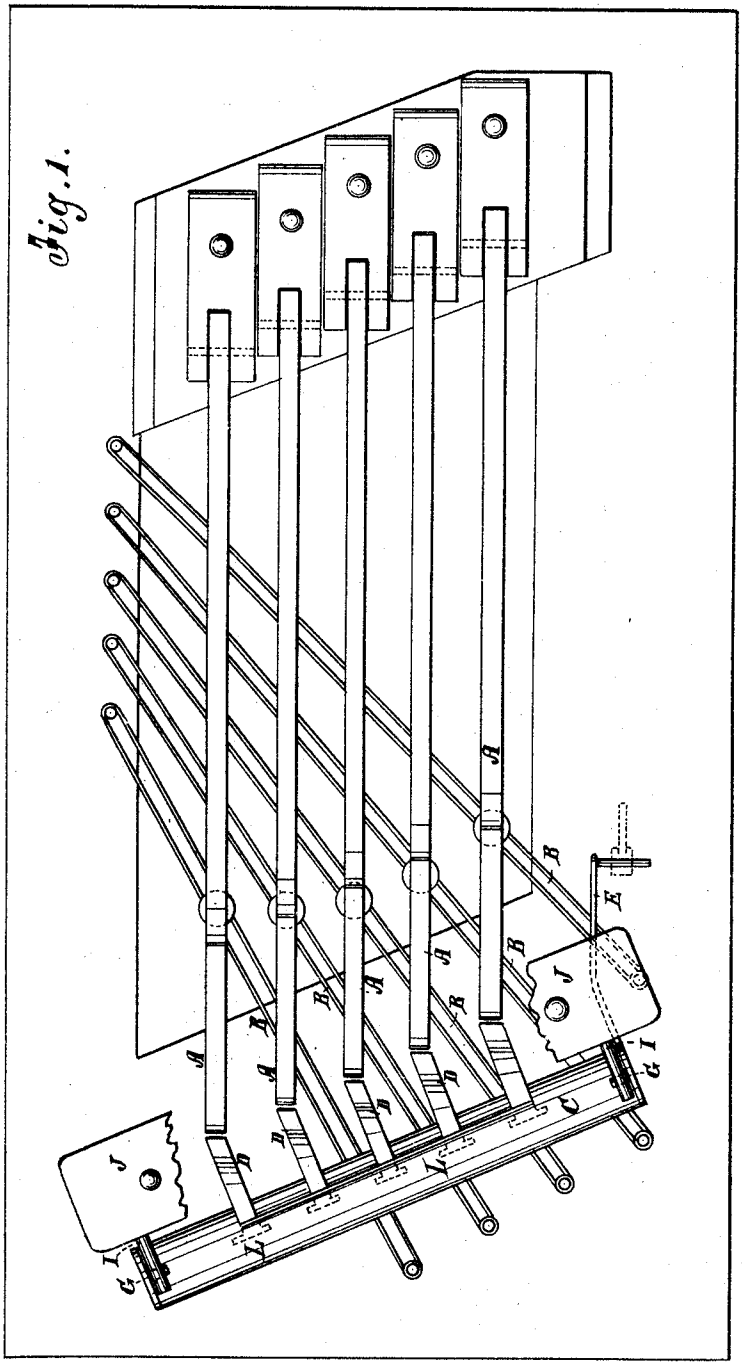
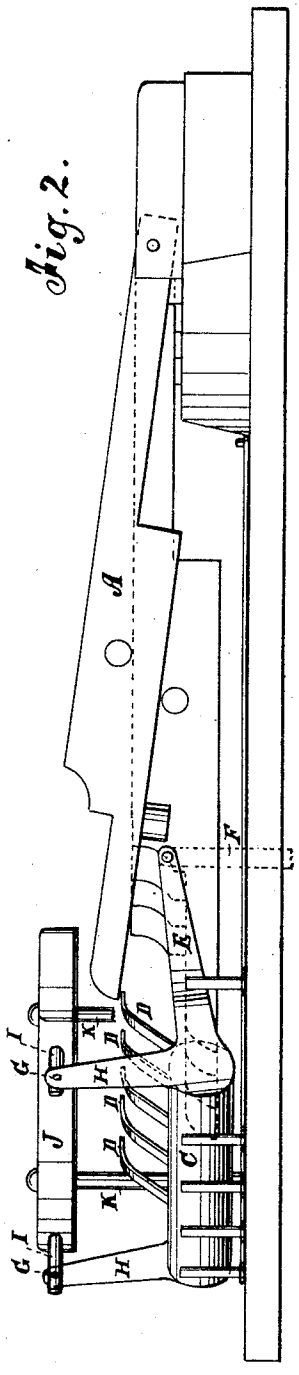


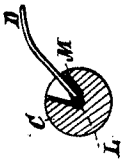
Fig. 2.



WITNESSES:

A Bennemendorf.
Oberquick

Fig. 3.



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UNITED STATES PATENT OFFICE.

M. WALDO HANCHETT, OF SYRACUSE, NEW YORK.

IMPROVEMENT IN PIANO-FORTE ATTACHMENTS.

Specification forming part of Letters Patent No. **153,766**, dated August 4, 1874; application filed May 9, 1874.

To all whom it may concern:

Be it known that I, M. WALDO HANCHETT, of Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Piano-Fortes, of which the following is a specification:

My invention relates to a mechanical attachment, suited to all kinds, styles, and patterns of piano-fortes, whereby it is designed to enable a performer to sustain or permit the continuance of the sound of a single one, two, or more strings or unisons after a key or keys by which the vibrations were produced have returned to their place of rest.

The attachment consists, as represented in this example—in which it is adapted to square pianos having the so-called "over-dampers"—of a bar or rod, of wood or other material, suspended near the ends of the dampers, so as to swing toward and from them, and having a series of any desired number of tongues or jacks, of metal or other material, attached to it; said tongues projecting toward the dampers and placed the same distances apart as they are, and the bar being connected with a pedal, so that after the dampers have been raised they may be caught by the tongues, (one or more,) and held off the strings after the keys go back, by causing the bar to swing forward by the pedal and swing the tongues under the dampers, and when the bar is allowed to swing back the tongues will withdraw, and leave the dampers unaffected by them. The tongues are also hinged to the bar so as to swing upward and allow the dampers to rise and fall under them without obstruction, while holding other dampers up.

In the accompanying drawing, Figure 1 is a plan view of a portion of a piano, showing the application of my attachment. Fig. 2 is a side elevation, and Fig. 3 is a cross-section, of the tongue or jack-bar.

Similar letters of reference indicate corresponding parts.

A represents the dampers, and B the strings. C represents the bar, and D the tongues or jacks, of my attachment, and E an arm or crank by which to attach a rod, F, for connecting the bar with a pedal for working it. This bar is suspended from pivots G by arms H, so as to swing toward and from the dampers. The pivots are on arms I, projecting from a stand, J, supported by rods K. The jacks are hinged to the bar at L, so as to swing upward readily, but they rest on shoulders M, which maintain them at the proper height for catching and holding the dampers. The tongues may have a sliding motion instead of swinging, if made to work independently of each other, but they will probably work easier, and with less wear, by swinging. The object of the swinging motion of the bar is that the tongues will swing low down under the dampers, so as not to strike against them.

The apparatus is so arranged and adjusted that while at rest the dampers may pass the ends of the tongues freely. When the bar is moved forward, only such dampers as are already up are caught or retained by the tongues. The dampers at rest allow the tongues to pass above them, and if, while the tongues are forward, a damper is lifted, the tongue immediately over it is free, by reason of its joint or hinge, to be carried up with it, and in this position it will not catch or retain the damper. Thus, while a lifted damper is being held up by one of the tongues, other dampers are free to act.

The improvement is most desirable and effective when applied to the tones of the piano below what is known as the middle C. A base or fundamental tone may thus be continued after being sounded, while at the same time both hands are at liberty to perform upon other keys, in effect giving a pedal-note to lighter harmonies being played on other parts of the instrument.

To produce this result, a key is struck and its damper thrown up from the string. The foot is then pressed on the pedal connected with the bar, and the bar is thrown forward, causing a tongue to catch and retain the uplifted damper, while the key is allowed to assume its former position by removal of the hand. The string is thus left free to vibrate, and its sound to continue until vibration ceases or the damper is allowed to drop by the removal of the foot from the pedal.

The apparatus may also be used to sustain as many of the dampers at one time as the number of the tongues attached to the bar, by first lifting all the dampers, by means of the forte or

damper-pedal, and then swinging the tongues under them. Thus the effect of a divided pedal may be produced. This pedal does not in any way interfere with or impede the action of the ordinary pedals. Other beautiful effects may be produced with this improvement by skillful performers.

In the practical construction of the apparatus the form, construction, and arrangement will be varied, to adapt it for use in any kind or style of piano.

I propose to call my improvement a "Sostenuto Pedal."

This apparatus or improvement may be so arranged or placed in a piano-forte as that the tongues will catch or act upon the damper-lifters, levers, keys, or connections as may be required by the peculiar form or construction of a piano-forte, or its action, or differing from the piano as here described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The piano-forte attachment herein described, consisting essentially of a series of tongues, hinged or otherwise attached to a movable bar, C, and arranged to operate substantially as and for the purpose hereinbefore set forth.

2. In combination with the damper-lifters, levers, or connections of a piano-forte, the series of tongues D and movable bar C, constructed and arranged to operate substantially as and for the purpose described.

M. WALDO HANCHETT.

Witnesses:
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