

A. STEINWAY.
Piano Attachments.

No. 164,054.

Patented June 1, 1875.

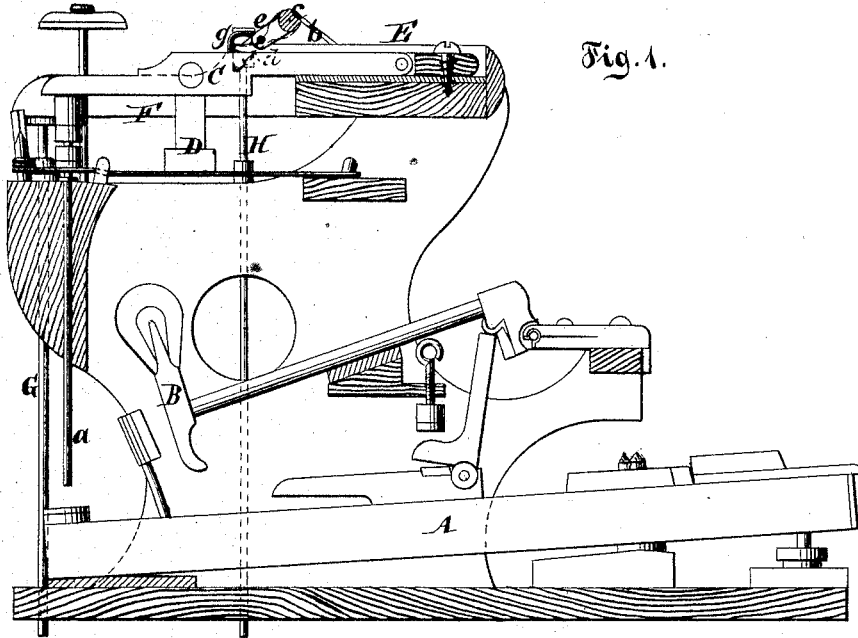
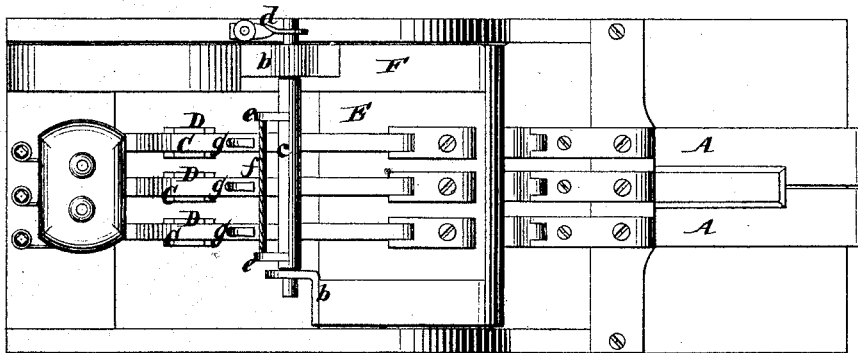


Fig. 1.

Fig. 2.



Witnesses.
Otto Hufeland.
Char. Wahlers.

Inventor.
Albert Steinway
per
Van Santvoord & Hauff
Attys

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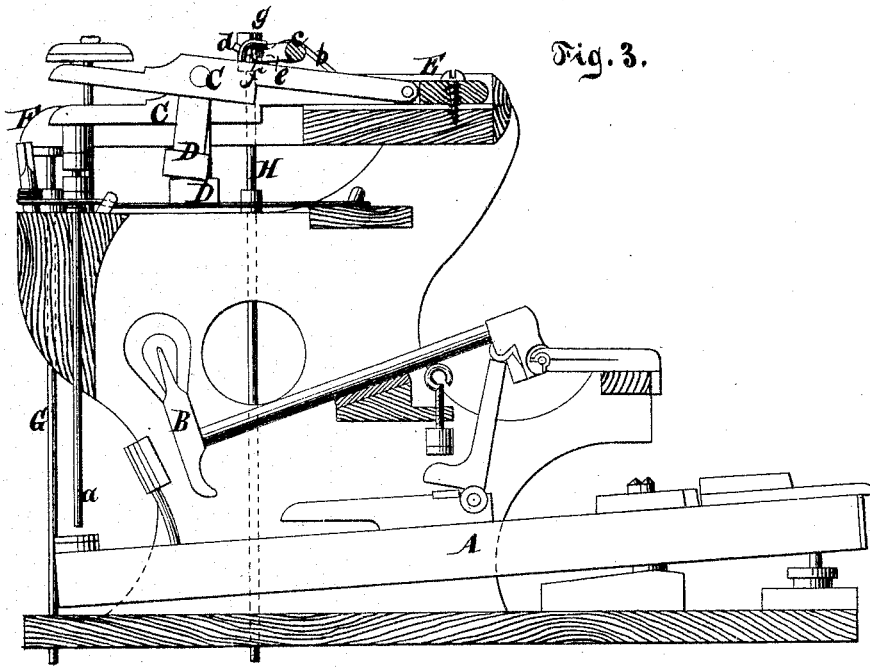


Fig. 3.

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UNITED STATES PATENT OFFICE

ALBERT STEINWAY, OF NEW YORK, N. Y.

IMPROVEMENT IN PIANO ATTACHMENTS.

Specification forming part of Letters Patent No. 164,054, dated June 1, 1875; application filed May 15, 1875.

To all whom it may concern:

Be it known that I, ALBERT STEINWAY, of the city, county, and State of New York, have invented a new and Improved Attachment to Piano-Fortes, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a transverse vertical section when the action is at rest. Fig. 2 is a plan or top view of the same. Fig. 3 is a transverse vertical section when one of the dampers is sustained by my attachment.

Similar letters indicate corresponding parts.

This invention relates to an improvement in that class of piano-forte attachments which I have described in Letters Patent No. 156,388, granted to me October 27, 1874, and which consists, essentially, of a movable frame, supporting a wire, cord, or strip of flexible or rigid material running parallel to the ends of the damper-levers, in combination with a pedal which serves to operate said frame, so that when one or more dampers have been raised, and the frame is caused to move in the proper direction, said damper or dampers are caught and upheld by the wire or strip of the frame after the corresponding key or keys have returned to their position of rest.

My present improvement consists in a rock-shaft, which is mounted in brackets secured to the frame carrying the damper-levers of a piano-forte, and from which extend two or more arms, which support a cord, wire, or strip of flexible or rigid material, in combination with hooks or noses secured in the damper-levers, in such a position that when one of the damper-levers is raised by the action of the corresponding key, and the rock-shaft is turned in the proper direction, the cord, wire, or strip supported by the arms of said rock-shaft catches in the hook of said damper-lever, and holds the damper-lever up from its string after the appropriate key has returned to its position of rest. One or more of the damper-levers and dampers can be held up by the cord, wire, or strip, and while this is done the performer is enabled to play with one or both hands, as may be desirable. A pedal provided for this purpose serves to impart to the rock-shaft the required motion, while the ordinary loud pedal acts on the damper-frame, and

serves to raise all the dampers contained in said frame from their strings independent of the rock-shaft and of the cord, wire, or strip connected to the same.

In the drawing, the letters A A designate the keys of a piano-forte, which act on the hammers B B by any suitable intermediate action, while the inner end of each of said keys, when such key is depressed, acts on a rod, *a*, the upper end of which is situated beneath the end of the appropriate damper-lever C, which carries the damper-head D, so that when, by the action of a key, one of the strings is struck, the corresponding damper is lifted up from said string, and the string continues to vibrate for some time, until the key is released and the damper permitted to fall back. The several damper-levers are contained in the damper-frame E, from which extends a lever, F, that rests upon a rod, G, and this rod connects by any suitable intermediate mechanism with the ordinary loud pedal, so that by pressing on said pedal the damper-frame is caused to swing up, and all the dampers contained in said frame are raised from their strings. On the damper-frame E are secured brackets or journal-boxes *b*, which form the bearings for a rock-shaft, *c*, and from this rock-shaft extends a lever, *d*, the bifurcated end of which catches between the two collars secured on a vertical rod, H, that extends down through the bottom of the case of the piano-forte, and is exposed to the action of a separate pedal, which I generally arrange in the lyre between the two pedals usually employed in a piano-forte. The weight of the rod H retains the rock-shaft *c* in the position shown in Fig. 1, and, if desired, this weight may be assisted by a spring. From said rock-shaft extend two or more arms, *e*, which support a cord, wire, or strip, *f*, of flexible or rigid material, and in the damper-levers C are secured hooks *g*, which are so situated that when the rock-shaft *c* is in its normal position, and one or more of the damper-levers are raised by the action of the appropriate keys, the hook or hooks of the damper or dampers thus raised will clear the cord, wire, or strip *f*; but if one of the dampers is raised from its string by the action of its key, and the rock-shaft *c* is turned by stepping on the pedal actuating the rod H, the

cord, wire, or strip *f*' catches beneath the hook of the damper-lever which had been raised, and the damper is upheld after the corresponding key has been permitted to return to its position of rest. One or more dampers can thus be upheld by the cord, wire, or strip *f*, and the corresponding strings can be permitted to continue their vibrations, while the performer is at liberty to play with one or both hands. The motion of the rock-shaft *c* is so adjusted that when one or more of the dampers have been caught by the cord, wire, or strip *f*, the hooks of the remaining damper-levers, when said levers are raised by the action of their keys, will not come in contact with said cord, wire, or strip. At the same time, by stepping on the loud pedal, all the dampers contained in the frame *E* can be elevated from their strings.

By this arrangement my attachment can be easily applied to the upper damper-levers of a piano-forte.

I disclaim distinctly the combination of a pedal or equivalent device and the damper of a piano with a swinging bar or intermediate

mechanism to uphold the dampers, so that while the pedal is pressed only those dampers are upheld which correspond with the keys pressed by the performer, since such combination of parts is already well known, and I further disclaim everything shown and described in my Patent No. 156,388.

What I claim as new, and desire to secure by Letters Patent, is—

The rock-shaft *c*, mounted on the damper-frame *E*, and provided with arms which support a cord, wire, or strip of flexible or rigid material, in combination with hooks *g*, secured in the damper-levers *C*, and with a pedal which serves to impart to said rock-shaft the required motion, when said parts are constructed and arranged substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 12th day of May, 1875.

ALBERT STEINWAY. [L. s.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.