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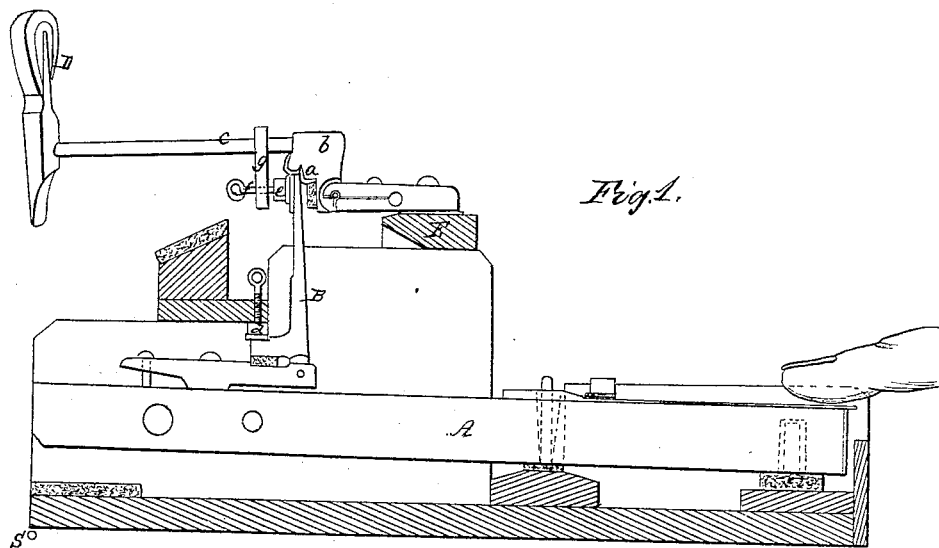
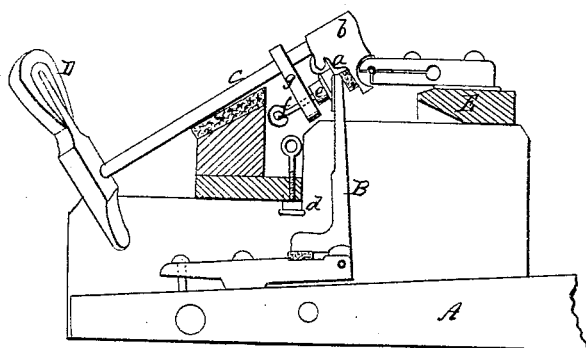


Fig. 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

FARDINAND FARHOLTZ, OF LOUISVILLE, KENTUCKY.

## REPEATING-ACTION FOR PIANOS.

Specification forming part of Letters Patent No. **49,394**, dated August 15, 1856.

*To all whom it may concern:*

Be it known that I, FARDINAND FARHOLTZ, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and Improved Repetition-Action for Piano-Fortes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical longitudinal section of this invention when in operation. Fig. 2 shows a similar view of the same when in a state of rest.

Similar letters of reference indicate corresponding parts.

The well-known object of a repetition-movement in piano-forte actions is to arrange the same so that while the key returns the hammer is held up to a certain height near the string, by which means the lever or jack can engage itself more quickly under the hammer and reproduce the note in less time and with less labor to the finger than before.

The repetition-movement which constitutes the subject-matter of this present invention consists of an adjustable pad applied by a suitable bracket to a hammer-shank in such relation to the nose or notch in the butt of the hammer and to the lever that by the action of said pad the point of lever is prevented from passing the nose or notch, and when the key is depressed the hammer is sustained at such a height that a small motion of the finger causes it to fly up against the string, and the same tone or note can be repeated with great rapidity and little exertion.

The key A is constructed in the ordinary manner, and it is provided with a lever or jack, B, of well-known construction. This lever is hinged to the end of an adjustable bar, which is secured to the key, as clearly shown in the drawings, and its upper end acts on the notch or nose *a* at the butt *b* of the hammer-shank *c*.

D is the hammer, which is connected to the hammer-rail E in the ordinary manner. The check required for hammers of the ordinary construction can be omitted in my improved action.

When the key is depressed the hammer rises, impelled by the action of the lever on the notch *a*, which is made with two steps or shoulders, and when the short arm of said lever strikes the pad *d* the point of the lever is thrown from the inner shoulder of the notch to the outer or upper shoulder, as shown in Fig. 1 of the drawings, and the hammer, after it has touched the string, falls back to the position shown in said figure until the key is released and allowed to resume its original position, when the hammer drops back to the position shown in Fig. 2 of the drawings.

In order to prevent the lever dropping off from the second step of the notch *a*, a pad, *e*, is arranged at the under side of the hammer. This pad is secured to the front end of a screw, *f*, which screws into a bracket, *g*, that is permanently attached to the shank of the hammer. By turning this screw the pad can be adjusted back or forth, so as to allow the lever to fall back more or less, and the position which the hammer assumes when the key is depressed and it (the hammer) drops back from the string is determined by the position of the pad.

The pad can be adjusted so that the slightest motion of the key, after it has been depressed, will again raise the hammer and bring it in contact with the string, and the same note or tone can thus be repeated in quick succession and with very little exertion of the finger.

I do not claim as my invention the application of a repetition-movement to the piano-forte action; neither do I claim, broadly, an adjustable pad upon a hammer-shank; but

I do claim as new and desire to secure by Letters Patent—

The double notches *a* upon the hammer butt *b*, in combination with the bracket *g*, adjustable pad *e f*, and jack B, all constructed, arranged, and employed in the manner and for the purposes herein specified.

FARDINAND FARHOLTZ.

Witnesses:

I. I. HIRSCHBUHL,  
JOS. CLEMENTS.