

# Device for Adjusting Piano-Forte Action Frames.

No. 219,323.

Patented Sept. 2, 1879.

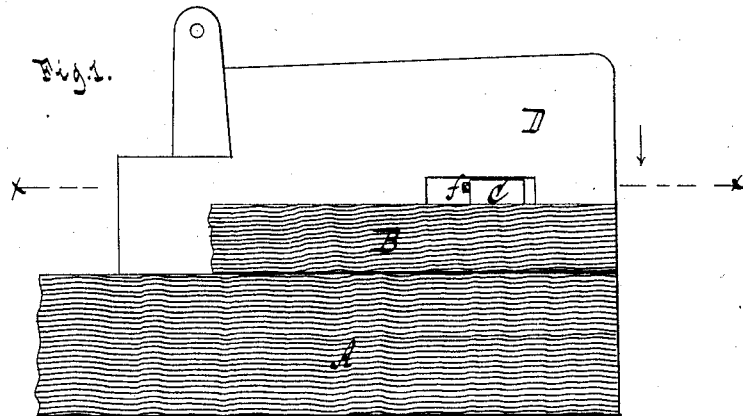
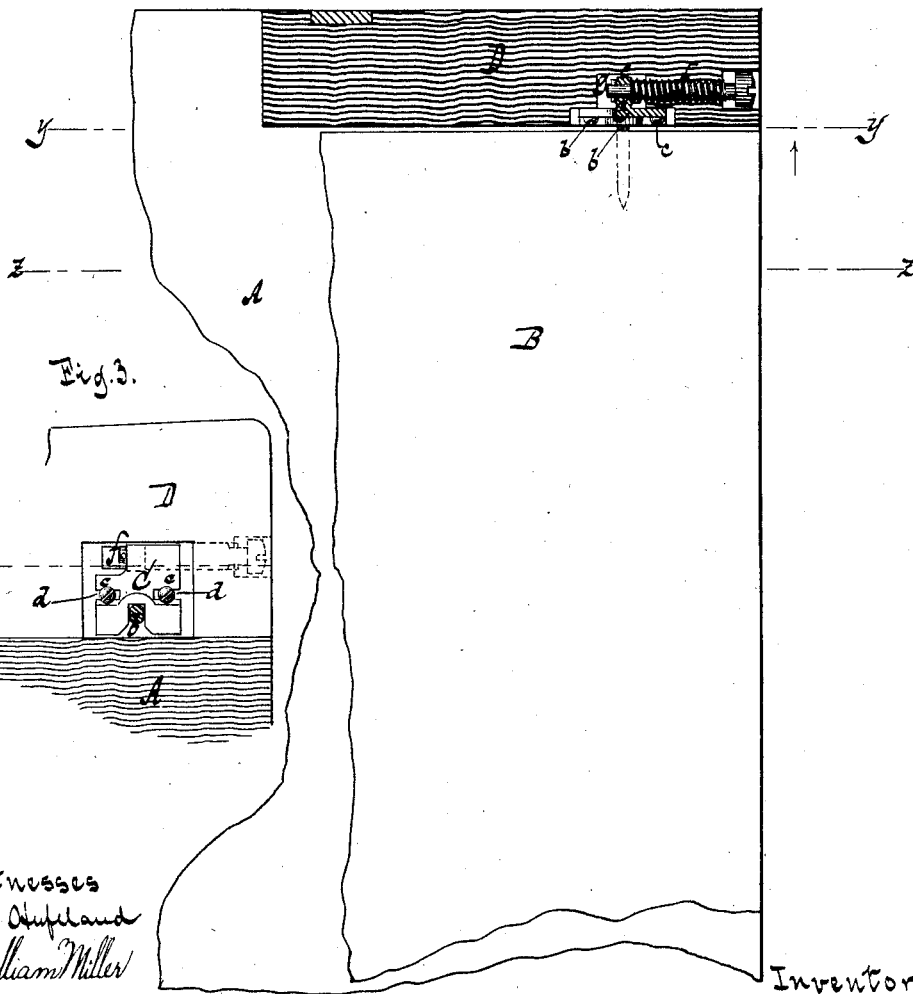


Fig. 2.



Witnesses  
Otto Aufeland  
William Miller

Inventor  
Christian Friedrich Theodor Steinway  
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# UNITED STATES PATENT OFFICE.

CHRISTIAN F. T. STEINWAY, OF NEW YORK, N. Y.

IMPROVEMENT IN DEVICES FOR ADJUSTING PIANO-FORTE-ACTION FRAMES.

Specification forming part of Letters Patent No. **219,323**, dated September 2, 1879; application filed July 10, 1879.

*To all whom it may concern:*

Be it known that I, CHRISTIAN FRIEDERICH THEODOR STEINWAY, of the city, county, and State of New York, have invented a new and Improved Device for Adjusting the Action-Frames of Piano-Fortes, which invention is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a transverse section in the plane  $z z$ , Fig. 2. Fig. 2 is a horizontal section in the plane  $x x$ , Fig. 1. Fig. 3 is a transverse section in the plane  $y y$ , Fig. 2.

Similar letters indicate corresponding parts.

This invention consists in the combination, with the key-block in a piano-forte, of mechanism adapted to adjust the whole action, with its key-frame and hammers, forward or back, with relation to the vibratory lengths of the strings, for the purpose of attaining the desired hammer-line or striking-point for the hammers on the strings.

Heretofore a slot was provided in the key-block D to receive a pin projecting from the ends of the key-frame; but by this means only the position of the key-frame from front to rear in its relation to the striking-point of the hammers on the strings was unchangeably fixed.

The quality and timbre of the tone, however, depend chiefly upon the hammers striking the strings at certain points in relation to their length, which points will slightly vary even in instruments of the same kind and construction, and will change by atmospheric influences, or when tuned to a higher or lower pitch, or by other causes.

The object of my invention is to provide means by which the hammers can at all times be adjusted forward or back, for the purpose of attaining the proper striking-points on the strings.

In the example shown in the drawings, the letter A designates the bottom of the piano, and on this bottom is placed a key-frame, B,

which supports the entire key-board and action. This whole mechanism, of which B represents a part, is fixed in its position on the bottom of the piano by a pin,  $b$ , (one or more,) which is driven into the ends of the key-frame, only one end being shown in the drawings. Said pin  $b$  engages with a slide, C, (see Figs. 2 and 3,) which, in the example shown, is fitted into a mortise in the key-block D, and it is held in position by two screws,  $c c$ , which engage with two slots,  $d d$ , in the slide, Fig. 3, and screw into the key-block D.

From the back of the slide C projects a lug,  $e$ , through which extends the plain end of a screw,  $f$ , which is tapped into the key-block, as shown in Fig. 2, and is held in the lug  $e$  by means of a pin,  $g$ , so that it can be freely turned, and that by its action the slide C can be moved backward or forward, as may be desired.

The head of the screw  $f$  is in such a position that it can be conveniently reached with a screw-driver. By turning the screw  $f$  the entire key-frame and action is moved backward or forward until the hammers attain the proper striking-point, and then the slide C can be fastened in position by the screws  $c c$ .

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

The combination, with a key-block in a piano forte, of a mechanism adapted to adjust the whole action, with its key-frame and hammers, forward or back with relation to the vibratory lengths of the strings, for the purpose of attaining the desired hammer-line or striking-points for the hammers on the strings, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 7th day of July, 1879.

CHRISTIAN FRIEDERICH THEODOR STEINWAY. [L. S.]

Witnesses:

W. HAUFF,  
E. F. KASTENHUBER.