A. Babcock,

Piano Action,

No. 1,389. Patented Oct. 31, 1839.

Fig. 2.

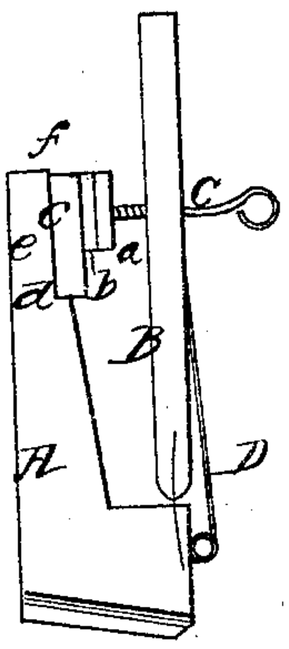
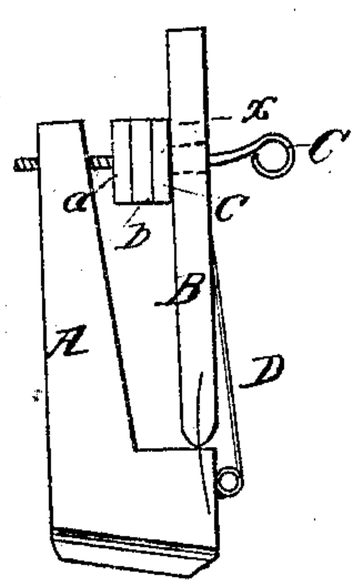


Fig. 1



UNITED STATES PATENT OFFICE.

ALPHEUS BABCOCK, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO JONAS CHICKERING, JOHN MACKAY, AND WM. H. MACKAY.

IMPROVEMENT IN PIANO-FORTES.

Specification forming part of Letters Patent No. **1,389**, dated October 31, 1839.

To all whom it may concern:

Be it known that I, ALPHEUS BABCOCK, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Piano-Fortes.

The said improvement, the principles thereof, and manner in which I have contemplated the application of the same by which it may be distinguished from other inventions of a like character, together with such parts, improvements, or combinations I consider new and claim as my discovery, I have herein described, which description, taken in connection with the accompanying drawings herein referred to, forms my specification.

My invention is properly an improvement on that part of the action denominated the "jack" or "grasshopper," and is fully exhibited by Figure 2, Fig. 1 being the ordinary mode of construction of this part of the instrument.

A, Figs. 1 and 2, represents the back of the jack, formed in the usual manner. B is the fly. C is the regulating-screw, which in the mode of construction heretofore applied screws into the head of the back A. (See Fig. 1.) A piece of wood or button *a* and two or more pieces of cloth *b c* were affixed to the screw C. Thus when the fly, after being borne away by the action of the key, returns to its former position it strikes against the damper *c*.

In my improved jack, Fig. 2, C is the regulating-screw, which screws into and through the fly B, as seen in the drawings. On the extremity I affix a button *a*, of wood or other proper substance, on the exterior face of which I apply a piece *b*, of cloth, leather, or other suitable material. To the back of the jack I attach a piece of thick cloth or wash-leather C, and generally glue but a portion of it to the rabbet or face, or that part from *d* to *e*, leaving the rest, or from *e* to *f*, disconnected.

In both figures, D represents the small wire spring which operates or forces back the fly.

When the fly in Fig. 1 strikes on the washer *c*, a very perceptible noise is produced, owing to this peculiar application of the damper *a b c* to the regulating-screw C and the stroke of the hard surface of the fly on the washer *c;* but in my improvement, Fig. 2, the two soft surfaces of the washer *b* and cloth *c* coming together at the stroke or blow of the fly, scarcely any noise can be detected, and the peculiar advantage of my improved jack over those heretofore used consists in this arrangement.

It will be perceived by reference to Fig. 1 that the shank of the regulating-screw C passes through a considerable opening *x y* on the fly B, as represented by the dotted lines. This opening is necessary for an unobstructed action of this part of the jack. Therefore an annulus or ring of the face of the washer *c* is all that receives the return-blow of the fly. A frequent repetition of blows tends, necessarily, to beat up and harden the surface, and by the noise produced interrupts the harmony and tone of the instrument.

Upon the hard surface of the fly I could glue or otherwise attach a washer of cloth to strike against the washer *c;* but, as I do not consider this so simple or perfect in action as the mode exhibited in Fig. 2, I decidedly give the preference to the latter.

Having thus fully set forth and described the nature of my said invention and improvement, I shall claim in the same as follows, viz:

Attaching the regulating-screw to the fly and making it movable with the same instead of connecting it to the jack, as has hitherto been the case, and also in combination therewith, and as necessary to the operation of the same, the arrangement of the damper upon the inner end of the regulating-screw and the attaching of a pad or cushion to the inside of the jack to receive the damper on the end of the regulating-screw, so as to deaden the stroke of the fly, the whole being constructed and operating as herein described.

In testimony that the above is a true description of my said invention and improvement I have hereto set my hand this 19th day of September, in the year 1839.

ALPHEUS BABCOCK.

Witnesses:

R. H. EDDY,

EZRA LINCOLN, Jr.