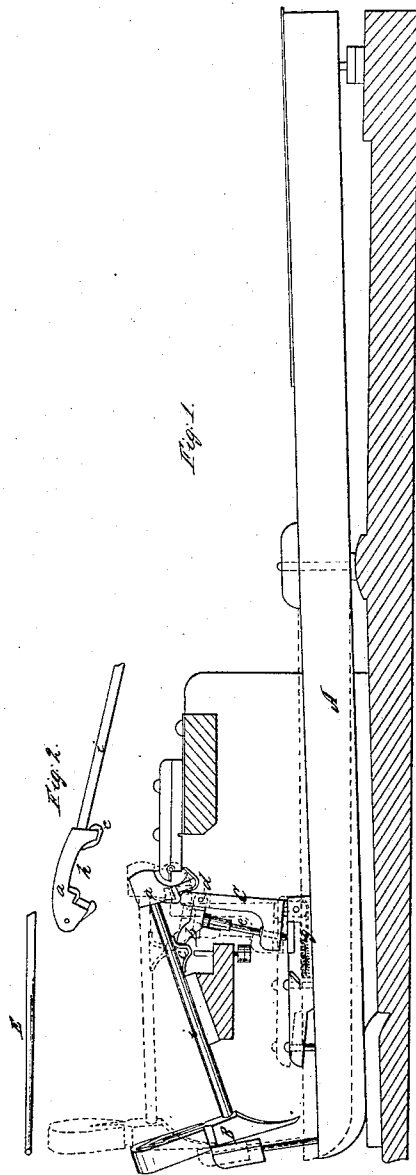


J. S. Morton,

Piano Action,

N^o 13,580.

Patented Sep. 18, 1855.



UNITED STATES PATENT OFFICE.

JOHN S. MORTON, OF NEW YORK, N. Y.

PIANOFORTE-ACTION.

Specification of Letters Patent No. 13,580, dated September 18, 1855.

To all whom it may concern:

Be it known that I, JOHN S. MORTON, of the city, county, and State of New York, have invented a new and useful Improvement in Pianoforte-Actions; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a side view of an action with my improvement applied, and Fig. 2, represents a modification of the hammer.

My improvement has reference to that description of pianoforte actions in which a quick and easy repeat is established by the intervention of a lever resting on a post or cushion and operating on a block attached to the hammer or on the hammer butt to catch the hammer at a short distance below the spring, and my invention consists in a novel construction, arrangement and operation together of these parts whereby, while the addition of a separate spring or weight to operate the repeat is dispensed with, the weight of the hammer acting upon the repeating lever is made to return the jack to its notch in the butt of the hammer and the action generally is simplified and improved.

The action represented in Fig. 1 has the movement of the key A, transmitted to the hammer B, by means of a jack C, applied to the key, operating on the hammer butt *a*, and being let off by a regulating screw *f*, in the same way as in the action generally known as the French action.

b, Fig. 1, is the lever attached to the jack, and *c*, the block attached to the hammer. The lever *b*, is hinged at one end by a pin *d*, to the jack not far from the point of the latter, and at about the middle of its length it rests upon a nearly upright cushion-headed pin *e*, which works freely in the lower arm of the jack and rests upon the jack bottom D, which is secured to the key in the usual manner. The end of the lever farthest from the jack bends upward under the hammer shank, and when the hammer is down this end of the lever stands just in front of the block *c*. This block is secured firmly to the

hammer shank *i*, and is leathered like all similar impinging surfaces in piano actions. As the playing end of the key is depressed to throw up the hammer to strike the string E, the movement of the jack in escaping carries the lever under the block *c*, and when the hammer falls, the block *c*, falls on the end of the lever, and causes the hammer to be arrested a very short distance below the string as is shown in red outline. While in this position the hammer is ready for repeating the blow to effect which it is only necessary previously to allow the playing end of the key to rise about a sixteenth of an inch. As the hammer falls on the rising face of the block *c*, acts in such a way on the end of the lever *b* as to have the effect of returning the point of the jack into the notch of the hammer butt, and although a spring is applied to the jack as shown at *g*, which tends to return the jack, the object of that spring is to prevent the jack flying too far out of the notch when it is let off.

Instead of the block *c*, being attached to the hammer shank, it may constitute a portion of the hammer butt, as shown in Fig. 2, and a recess *h*, will then have to be made in the hammer butt for it to play into. This will be the method of construction when the hammer is arranged as shown in Fig. 2 to work in the opposite direction to that shown in Fig. 1.

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

The arrangement and operation together shown and described of the lever (*b*) pivoted to the jack, post or cushion (*e*) and block (*c*), with the jack and hammer, to effect the repeat; and whereby, while the use of an additional spring or weight is dispensed with, the weight of the hammer operating on the lever returns the jack to its notch in or position under the butt, essentially as set forth.

JOHN S. MORTON.

Witnesses:

JOS. GEO. MASON,
J. W. COOMBS.