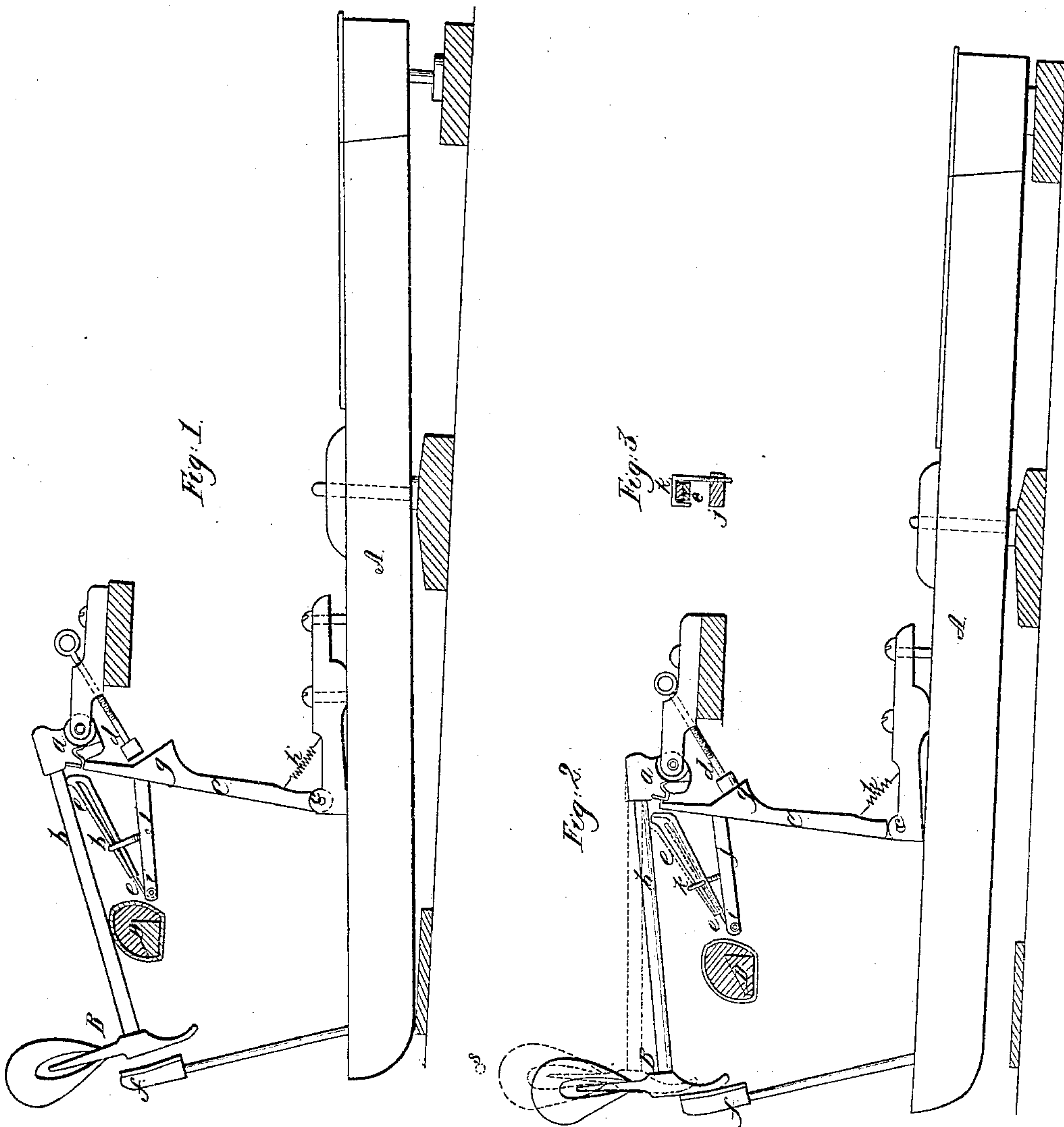


H. Steinway
Piano Action.

N^o 20,595.

Patented June 15, 1858.



UNITED STATES PATENT OFFICE.

H. STEINWAY, OF NEW YORK, N. Y.

PIANOFORTE-ACTION.

Specification forming part of Letters Patent No. 20,595, dated June 15, 1858; Reissued February 4, 1862, No. 1,271.

To all whom it may concern:

Be it known that I, HENRY STEINWAY, 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, exhibiting it at rest. Fig. 2 is a similar view exhibiting the action with the key depressed. Fig. 3 is a transverse section of the spring which constitutes the principal feature of my invention, and front view of the screw for adjusting it.

Similar letters of reference indicate correspondent parts in the several figures.

The object of my invention is to provide for the instantaneous return of the jack to its notch in the hammer-butt after the hammer has struck the string for the purpose of enabling a quick repetition of the blow to be given by a contrivance more simple in its construction and mode of application and operating with less friction than the sliding post and its appendages which are the subject-matter of Letters-Patent of the United States, granted to me May 5th, 1857.

The invention consists chiefly in a spring applied to the jack in the manner herein-after described.

To enable others skilled in the art to make and apply my invention, I will proceed to describe its construction and operation.

A, is the key.

B is the hammer, having its butt *a*, formed as in what is known as the french action. The shank *b*, of the hammer is made without the block on the under side described in my aforesaid Letters Patent, but has its underside made flat near the butt.

D is the rest rail.

C is the jack, working on the pin *c*. This jack is made without the heel commonly employed in the french action; and instead thereof it has an inclined block *g*, attached to its front side for the regulating screw *d*, to act upon, to throw its point out of the notch in the hammer butt. The regulating screw is applied in an inclined position in front of the jack.

h, is the jack spring, and *f*, is the back check, both applied in the common way.

s, is the string.

e, is the spring, which constitutes my invention attached to an arm *j*, which is secured rigidly to the back of the jack, not far from the point thereof. The said spring is composed of a piece of steel wire, one end of which is coiled upon the pin *i*, which attaches it to the arm *j*, for the purpose of giving it elasticity; and the greater portion of said spring is covered with a flat strip of leather, felt, or soft material, which extends around its free extremity and forms a soft cushion or bearing for the flat portion of the hammer shank, near the butt. The spring occupies an oblique position relatively to the hammer shank, and is so set as to exert an upward pressure upon the hammer shank which tends to raise the hammer. This upward pressure is regulated by a hooked screw *k*, which screws into the arm *j*, and which is so formed and applied to the spring, as shown in Fig. 3, as to prevent the spring getting out of place laterally.

The operation of the action is as follows: When the key is at rest as shown in Fig. 1, the point of the jack is held in the notch of the hammer butt by the spring *h*, and the spring *e*, scarcely touches or at any rate presses very lightly against the shank of the hammer. When the front end of the key is struck in playing, the jack acts in the notch of the hammer butt, in the usual manner and then is caused to escape by the action of the block *g*, against the regulating screw *d*. When the hammer falls after striking the string sharply, descends far enough to be caught by the back check and by the momentum of the fall acting on the spring *e*, the latter is bent down to some extent as shown in black outline in Fig. 2; but as soon as the playing end of the key is permitted to rise in the slightest degree, the hammer is relieved from the back check, and the spring *h*, lifts up the hammer nearer to the string, in the manner shown in red outline in Fig. 2, as is done in the Evard action, and brings the notch in the hammer high enough for the point of the jack to fall partly into it, so that a very little farther rise of the playing end of the key will permit the said point to be forced far enough into the notch to enable the blow to be repeated. When the key is struck very softly by the player, the recoil of the hammer will not be sufficient to carry it down to the back

check, but the hammer will be arrested by the spring *e*, very near the string, so that after a heavy or light blow the repeat can be effected by permitting the key to rise but
5 a very short distance. The screw *k*, permits the adjustment of the spring *e*, to make it support the hammer higher or lower. To permit the said screw to be turned, the spring requires to be pressed down out of its way.
10 What I claim as my invention, and desire to secure by Letters Patent, is:
The spring *e*, attached to an arm *j*, at the

back of the jack, and arranged relatively to the hammer substantially as herein described, for the purpose set forth; and in 15 combination with the spring thus arranged and applied, I claim the hooked screw *k*, applied to the arm *j*, as described, to adjust the spring relatively to the hammer, and confine it laterally in a proper position.

HENRY STEINWAY.

Witnesses:

WM. TUSCH,
W. HAUFF.

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