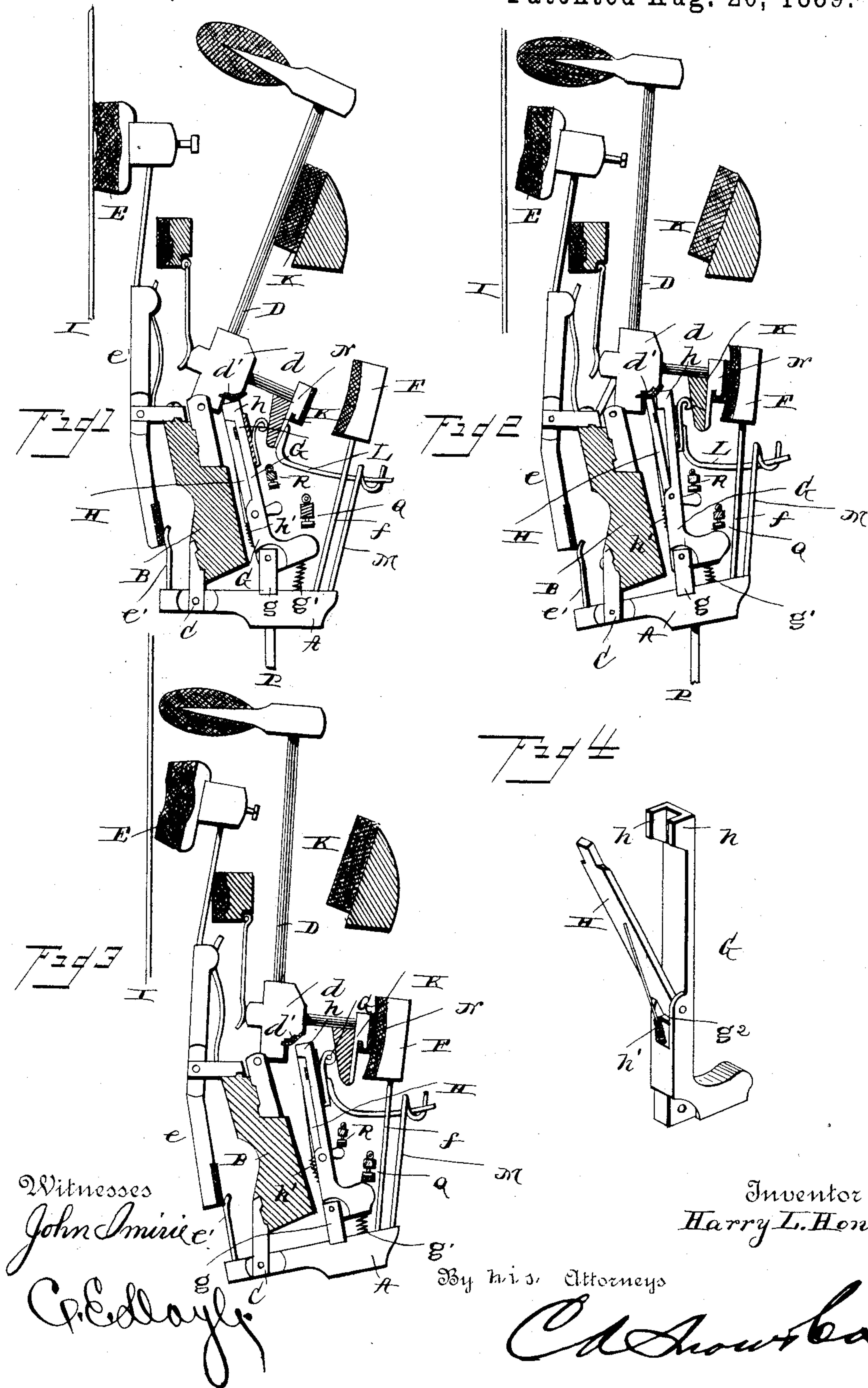


H. L. HONE.
PIANO ACTION.

Patented Aug. 20, 1889.



UNITED STATES PATENT OFFICE.

HARRY LYMAN HONE, OF LEXINGTON, KENTUCKY.

PIANO-ACTION.

SPECIFICATION forming part of Letters Patent No. 409,325, dated August 20, 1889.

Application filed January 9, 1889. Serial No. 295,896. (No model.)

To all whom it may concern:

Be it known that I, HARRY LYMAN HONE, a citizen of the United States, residing at Lexington, in the county of Fayette and State of Kentucky, have invented new and useful Improvements in Actions for Upright Pianos, of which the following is a specification.

The invention relates to improvements in actions for upright pianos; and it consists in a certain novel construction and combination of devices, fully described hereinafter in connection with the accompanying drawings, and specifically pointed out in the claims.

In the drawings, Figure 1 is a view of a piano-action embodying my invention in its normal position. Fig. 2 is a view showing the position of the action after the key has been struck, with the parts in position to permit a repetition. Fig. 3 is a view showing the position of the parts after the second stroke of the hammer, and illustrating the manner of tripping the fly or supplemental jack. Fig. 4 is a detail perspective view of the jack and the fly-jack detached.

This action belongs to that class known as "repeating-actions," and the parts thereof are arranged in such relation that a rapid repetition of a note is possible, as more fully described hereinafter.

A designates the jack-lever, which is pivoted near its rear end to the hanger B, which depends from a suitable rail C.

D designates the hammer provided with the usual knuckle *d*, having a shoulder *d'*.

E designates the damper, and *e* the damper-lever.

e' designates the tongue on the rear end of the jack-lever to operate the damper-lever, and F designates the back check, the shank *f* of which is attached to the front end of the jack-lever. These parts are all of the ordinary and well-known construction.

G designates the jack, which is pivoted to a standard *g* on the jack-lever, and its upper end is normally held in engagement with the shoulder on the knuckle *d* by means of the spring *g'*, which bears against the free end of the toe of the jack, and H represents a fly-jack smaller than the jack G, which is pivoted in a rectangular opening *g²* in the said jack and terminates at its upper end slightly

below the upper end of the jack. The upper end of the fly-jack fits between rearwardly-extending ears *h h* on the upper end of the jack, whereby the felt on the knuckle of the hammer is protected from the upper end of the fly-jack, and the toe of the fly-jack projects beyond the front side of the jack, as shown. A small coiled spring *h'* connects the rear side of the fly-jack with the jack, whereby the upper end of the former is drawn away from the jack.

I represents the wire against which the damper normally rests.

K designates the rest against which the hammer normally bears, and L designates the bridle which is connected to the bumper N on the knuckle of the hammer, and is attached at its free end to the upper end of the bridle-wire M on the front end of the jack-lever.

The operation of the invention is as follows: When the key, (not shown,) to which the front end of the jack-lever is attached by means of the rod P, is depressed, the hammer is thrown rearward in the ordinary manner by the jack, the said jack being tripped at the proper point by means of the adjustable stop Q, and thereby disengaged from the shoulder of the hammer. As the upper end of the jack moves away from the said shoulder the upper end of the fly-jack separates therefrom, (owing to the contraction of the spring *h'*), and therefore when the hammer rebounds from the wire its shoulder bears on the upper end of the said fly-jack, as clearly shown in Fig. 2 of the drawings. A second stroke may now be made, by repeating the pressure on the key, before the parts have had time to return to their normal positions, as shown in Fig. 1. At the proper point in the second stroke, (namely, just as the hammer strikes the wire,) the fly-jack is in turn tripped by an adjustable stop R, (which is arranged above the stop Q,) thereby disengaging its upper end from the shoulder of the knuckle. As the key is allowed to rise slightly in order to make the third stroke, the fly-jack is removed from its stop, thereby allowing it to be drawn rearward and engage the shoulder *d'* in position for a third stroke.

The object in terminating the fly-jack slightly below the upper end of the jack is to enable the former to swing under the

shoulder of the knuckle when its toe is removed from the stop R, even when the hammer has rebounded from the wire.

From the above description it will be readily seen that a rapid repetition of a note may be attained without allowing the parts of the action to return to their normal positions, the movement, after the first stroke, being confined almost entirely to the fly-jack, which being small and light will operate quickly.

Having thus described the invention, I claim—

1. The combination, with a jack, of a fly or supplemental jack pivoted in a recess formed in the rear face thereof and adapted to engage the knuckle of the hammer, substantially as and for the purpose specified.

2. The combination, with a jack, of a fly-jack pivoted thereto and terminating at its upper end below the upper end of the jack, substantially as specified.

3. The combination, with a jack, of a fly-jack pivoted thereto and the spring connected to the latter to normally draw its upper

end away from the jack, substantially as specified.

4. The combination, with a jack, of the fly-jack pivoted thereto and fitting at its upper end between rearwardly-extending ears on the jack, whereby, when the jack is in engagement with the knuckle of the hammer, the fly-jack is held out of contact therewith, substantially as specified.

5. The combination, with the jack connected to the jack-lever and adapted to engage a shoulder on the knuckle of the hammer and the stop Q to engage the toe of the jack, of the fly-jack pivoted to the jack and normally held out of contact therewith at its upper end and the stop R to engage the toe of the fly-jack, substantially as specified.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in presence of two witnesses.

HARRY LYMAN HONE.

Witnesses:

F. H. NORTON,
JAMES M. DALY.