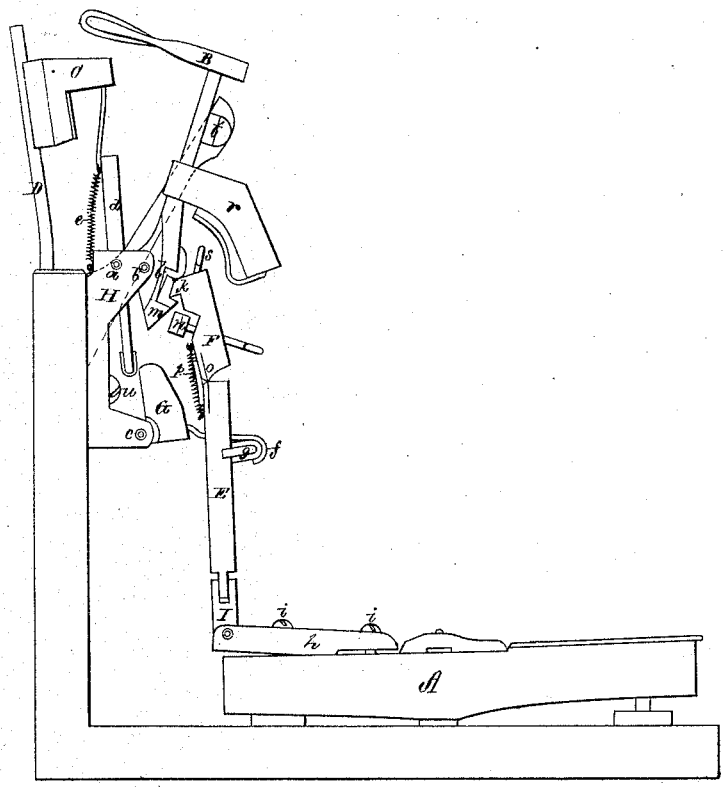
C. E. ROGERS.

Upright-Piano Action.

No. 160,281. Patented March 2, 1875.



Witnesses.

L. N. Keller

J. R. Snow.

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by his attorney.

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UNITED STATES PATENT OFFICE.

CHARLES E. ROGERS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE ROGERS UPRIGHT-PIANO COMPANY, OF SAME PLACE.

IMPROVEMENT IN UPRIGHT-PIANO ACTIONS.

Specification forming part of Letters Patent No. **160,281**, dated March 2, 1875; application filed November 13, 1874.

To all whom it may concern:

Be it known that I, CHARLES E. ROGERS, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Actions for Upright Piano-Fortes; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, which is a side view of my improved action, or of a hammer and key provided with actuating mechanism in accordance with my invention.

My invention relates to the damper-actuator as combined with the jack by a hooked arm and a cushioned projection; also, to the jack combined with the key by a universal joint or an intermediate piece, connected to them in manner as hereinafter explained; also, to the hammer, provided with a cushioned hook, escapement-notch, and stop-arm, in combination with the jack provided with a hooked escapement, and the damper-actuator applied to the jack by a hook and projection, all as hereinafter explained.

In such drawing, A denotes the key; B, the hammer; C, the damper; D, the string; E, the jack; F, the jack-escapement; G, the damper-actuator, and H the bracket, to which the damper, the hammer, and the damper-actuator are pivoted or hinged, the several hinge or pivot pins being shown at *a b c*. The shank *d* of the damper turns on the pin *a*, and is connected with the bracket by a helical spring, *e*, whose purpose is to throw the damper against the string, the object of the actuator G being to force the damper off the string preparatory to each blow of the hammer thereon. This damper-actuator, formed and arranged as shown, is composed in part of a hook, *f*, which goes through a vertical slot made in the jack E, and hooks around a cushioned projection, *g*, extending from the jack in manner as shown.

At its foot the jack is connected with the key A, or an adjustable rocker, *h*, (formed and arranged with and held to the key by screws *i i*, disposed as shown,) by means of an auxiliary piece, I, hinged both to the jack and the key or part *h*, the pivots of the hinges being at right angles, so that, while the piece I may turn in the plane of the key, the jack may be turned in a plane at right angles therewith, such being to enable the jack to readily accommodate itself to the damper-actuator G, and the escapement to accommodate itself to the hooked notch of the key.

The escapement F is hooked, as shown at *k*, to work in the notch *l* of the tail-block of the hammer, and co-operate with a hook, *m*, at the lower part of such notch. The said escapement F is hinged to the jack, as shown at *o*, and both are provided with a helical spring, *p*, connected to them at its ends, and arranged as represented, such spring serving to draw the escapement up to the tail-block of the hammer. Furthermore, the escapement F has an adjustable button, *n*, applied to it by means of an adjusting-screw, all being as shown.

From the hammer there is extended, in manner as represented, a cushioned arm, *r*, which, with an adjustable stud, *s*, projecting up from and screwed into the top of the escapement F, serves to stop the escapement in its rearward movement after each blow of the hammer.

From the above it will be seen that the jack is supported at or near its upper part by the damper-actuator, while at its lower part such jack is connected with the key by the auxiliary piece I, or by such and the rocker *h;* also, that the escapement operates both to advance the hammer to the string, and subsequently to pull the said hammer away therefrom, or to aid in insuring its falling back upon its rest *t;* also, that the actuator G is pulled back by the hook *f* and projection *g* when the jack is descending; also, that this piano-action is not only simple and effective in construction, but can easily be taken apart sufficiently for a person to gain ready access to the screw *u* for confining the bracket H in place, and this without any necessity of disturbing the parts of the next adjacent action or actions. This can be done by disengaging the damper-actuator from the jack, and next turning down each, so as to uncover the screw *u*.

I claim—

1. The damper-actuator G, combined with the jack E by the hooked arm or hook *f* and

the cushioned projection *g*, arranged as represented.

2. The jack E and escapement F, combined with the key A by the intermediate hinged piece I applied to them, substantially as set forth.

3. The hammer B, provided with the cushioned hook *m*, escapement-notch *l*, and arm *r*, arranged as described, in combination with the jack E, provided with the hooked escapement F, and the damper-actuator G applied to said jack, all being substantially as shown and specified.

CHARLES E. ROGERS.

Witnesses:
R. H. EDDY,
J. R. SNOW.