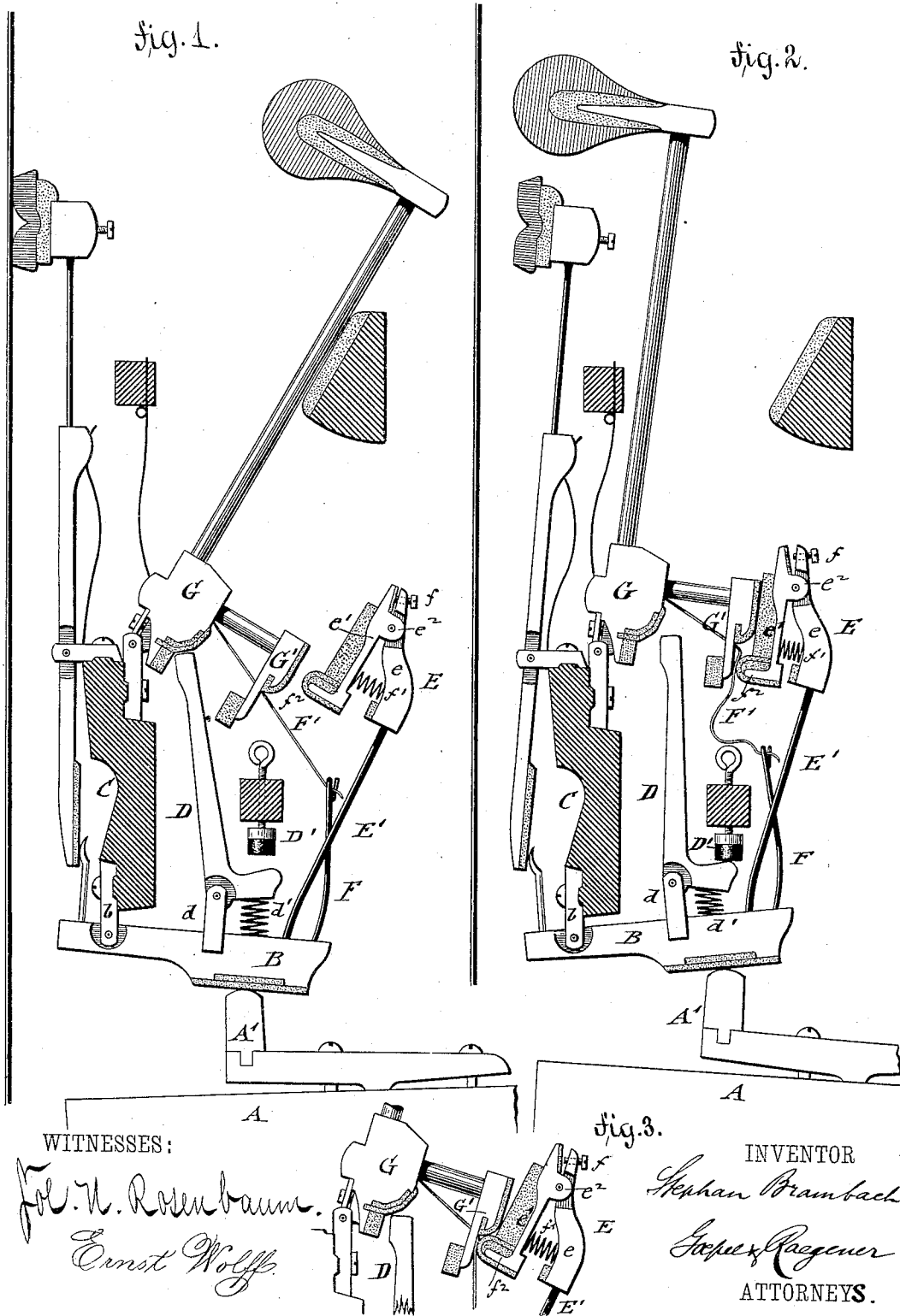


(No Model.)

S. BRAMBACH.
UPRIGHT PIANO ACTION.

No. 322,089.

Patented July 14, 1885.



UNITED STATES PATENT OFFICE.

STEPHAN BRAMBACH, OF NEW YORK, N. Y.

UPRIGHT-PIANO ACTION.

SPECIFICATION forming part of Letters Patent No. 322,089, dated July 14, 1885.

Application filed October 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, STEPHAN BRAMBACH, of the city, county, and State of New York, have invented certain new and useful Improvements in Upright-Piano Actions, of which the following is a specification.

This invention has reference to an improved upright-piano action by which the jack is quickly returned into its normal position on the hammer-butt after the hammer has struck the string, so as to facilitate repetition; and the invention consists of the combination of a jack, a hammer-butt having a forward-extending shoe, and a back-check provided with a pivoted and spring-cushioned part for catching the shoe of the hammer-butt and holding it in position on the return of the jack to the hammer-butt.

In the accompanying drawings, Figures 1 and 2 represent side elevations of my improved upright-piano action, showing the same, respectively, in a position of rest and in the act of striking the string; and Fig. 3 is a side view of a part of the same, showing the jack returned to its position on the hammer-butt, while the hammer is still in position on back-check.

Similar letters of reference indicate corresponding parts.

A in the drawings represents the key-lever, to the rear end of which is applied a fixed heel, A', that acts upon the front end of the jack-lever B. The jack-lever B is fulcrumed to a downwardly-extending bracket, b, of the supporting-rail C of the action and provided at its rear end with the usual wire-arm for operating the damper-lever. The jack D is fulcrumed in the usual manner to a raised support, d, of the jack-lever B, the shorter arm of the jack D being acted upon by a spiral spring, d'. At the front end of the jack-lever B is arranged the wire shank E' of the back-check E, also the bridle-wire F, to which the bridle F' is attached in the usual manner. The bridle F' passes through a hole in the downwardly-extending shoe G' of the hammer-butt G, and is attached to the hammer-butt G. An adjustable check, D', engages the shorter arm of the jack D, while the upper end of the jack engages a felted shoulder of the ham-

mer-butt G and operates thereby the hammer when the key is depressed.

The parts so far described are all old and have been used heretofore, and I do not lay any claim to the same.

My improvement consists in the special construction of the back-check E, which consists of two parts, a main part, e, attached to the upper end of the check-wire E', and of an oscillating catch-piece, e', that is fulcrumed by ears e² to the recessed upper end of the main part e. At the upper end of the main part e is arranged a stop screw, f, that regulates the oscillations of the fulcrumed piece e'. A spiral spring, f', is interposed between the main part e and the lower part of the oscillating catch-piece e', so as to impart the required elasticity to the latter. The oscillating piece e' has a shoulder, f², at its lower end that serves to arrest the downward motion of the shoe G' after the hammer has struck the string. As the shoe is caught by and guided along the oscillating piece e' until arrested by the shoulder f², the jack D has an opportunity to return to its position below the shoulder of the hammer-butt G, while the shoe G' slides along the face of the oscillating piece e' and rests on the shoulder f² of the same, as shown clearly in Fig. 3. In this position of the action the hammer is supported at a short distance from the spring and prevented from dropping back to its cushion, so as to be in position for quick repetition, as the length of the stroke is thereby considerably diminished. As soon as the key is released, the bridle returns the hammer to its cushion, while the back-check releases the shoe of the hammer-butt and admits its return into a position of rest, as shown in Fig. 1. The action is then ready for the next operation. The oscillating and spring-cushioned part e' of the back-check E serves also for neutralizing the vibrations of the hammer immediately after its stroke. The essential feature of my invention, however, consists in the quick return of the jack into its position on the hammer-butt by the action of the oscillating piece of the back-check on the shoe of the hammer-butt, whereby repetition is facilitated.

My improvement can be applied to any up-

right-piano action now in use, as the back-check can be readily attached to the back-check wires of the same. The elastic back-check can also be used in actions for grand
5 and square pianos.

I am aware that piano-actions in which the back-check is provided with an oscillating catch-piece has been used heretofore, and I do not claim the same, broadly.

10 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with a jack-lever, a jack, and a hammer-butt having a backwardly-ex-

tending shoe, of a back-check supported on the jack-lever, said back-check consisting of 15 a main part having a stop-screw at its upper end and a fulcrumed and spring-cushioned catch-piece having a shoulder at the lower end, substantially as set forth.

In testimony that I claim the foregoing as my 20 invention I have signed my name, in presence of two subscribing witnesses.

STEPHAN BRAMBACH.

Witnesses:

PAUL GOEPEL,
SIDNEY MANN.