(No Model.)

C. B. SCHWEIKART.

REPEATING ACTION FOR PIANOS.

No. 591,887. Patented Oct. 19, 1897.

Fig. 1.

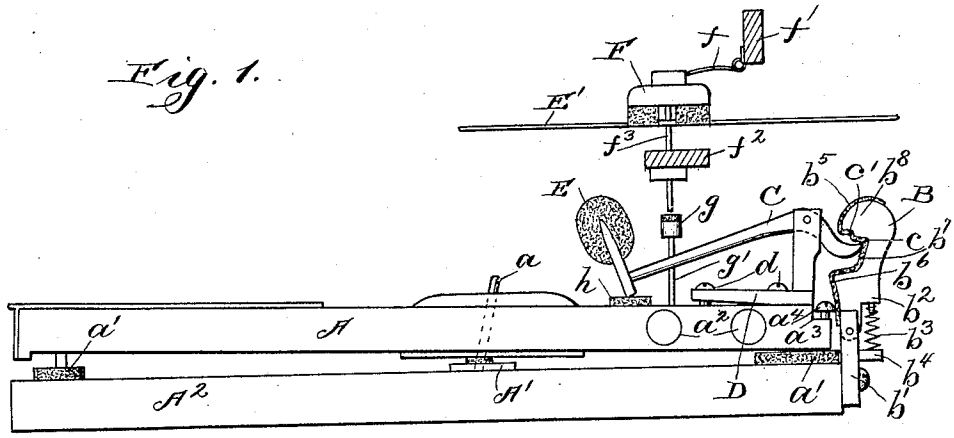


Fig. 2.

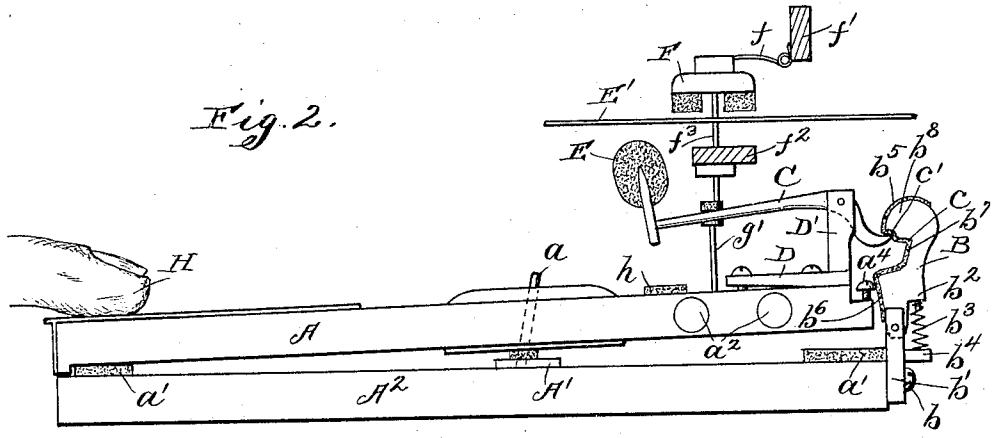
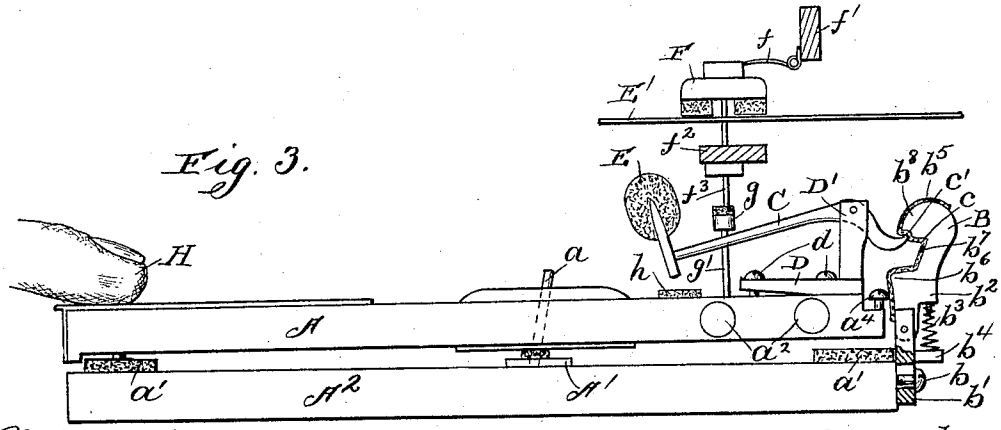


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES B. SCHWEIKART, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-THIRD TO JOSEPH P. SCANLAN, OF SAME PLACE.

REPEATING ACTION FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 591,887, dated October 19, 1897.

Application filed March 8, 1897. Serial No. 626,352. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. SCHWEIKART, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Repeating Actions for Pianos, of which the following is a specification.

This invention relates to improvements in piano-actions; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The objects of my invention are, first, to provide a piano-action which shall be simple and inexpensive in construction, strong, durable, and effective in operation; and, second, such an action in which, by reason of the peculiar construction and arrangement of its parts, a repetition of the stroke of the hammer against the string may be attained, without the necessity of the full vertical movement of the key, which is required in actions of the ordinary construction and those now in general use.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a view, partly in section and partly in elevation, of my improved action, showing its parts in their normal position. Fig. 2 is a similar view showing the parts in the position they will occupy just after the string has been struck by the hammer, and Fig. 3 is a similar view showing the parts in position to repeat the stroke.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the piano-key, which may be of the ordinary or any preferred construction, and as usual is secured on a balance-rail A′, by means of a pin a, and is shielded from the keyboard A^2 at its ends by means of pieces of felt a', or other suitable material. The inner portion of the key is provided with leads a^2, or weights, to normally hold said portion in a lowered position, and its inner end is provided in its upper surface with a recess a^3, in which is vertically secured a regulating-screw a^4, to act on the repeater B, as will be presently explained.

To the inner surface of the keyboard a^2 is vertically adjustably secured, by means of a screw b, an upright or standard b', to the upper portion of which is pivotally secured the repeater B, whose lower portion is formed or provided with a shoulder or rearward extension b^2, against and to which rests and is secured a spring b^3, whose other end rests on a projection b^4, on the upright b', which supports the repeater. As is clearly shown in the drawings, this repeater is of an irregular or cam shape in its front portion, when viewed from the side, and has said portion covered with buckskin b^5, felt, or other soft material. The lower front portion of the repeater is formed with a forwardly-inclined portion b^6, with which the regulating-screw a^4 contacts. Above the said inclined portion b^6, and extending rearwardly in the repeater, is a recess b^7, for the reception and operation of the rear end of the hammer-shank. In the lower surface of the forwardly-extending portion b^8 of the repeater, above the recess b^7, are formed two angular depressions or recesses c and c', the former of which is really the upper corner of the recess b^7, and in which the rear end of the hammer-shank normally lies. The recess or depression c' is forwardly located with respect to the recess c, and is for the reception of the rear end of the hammer-shank, when it is desired to quickly repeat the stroke on the string.

Adjustably secured to the upper rear portion of the key, by means of screws d, is a rocker D, in the upper part of whose vertical portion D′ is pivotally secured the hammer-shank C, whose rear portion is bent downwardly and then outwardly to engage the repeater. The front end of the shank C is provided with a hammer E, of felt or other suitable material, to strike the string E′ when it is desired to produce a note or sound. Above the string E′ is located a damper F, of the ordinary or any preferred construction, which is supported by means of a spring f, secured to a rail f', located above the strings. Depending from the damper and extending through a guide-opening in the sounding-

board f^2 is a wire or rod f^3, which is adapted to contact with the damper-lifter button g, on the rod g', secured vertically on the key A, near one side of the hammer-shank.

From the foregoing and by reference to the drawings it will be seen, and readily understood, that by pressing the front end of the key downwardly, by means of the finger H, it will cause its rear end to be raised and the screw a^4 to contact with the forwardly-extending portion b^6 of the repeater, thus forcing the repeater rearwardly and allowing the rear end of the hammer-shank to engage the recess or depression c', when the further depression of the front end of the key will cause the hammer to strike the string and at the same time raise the damper, by means of the lifter-button g, which will contact with the lower end of the rod f^3, which, as before stated, is secured to the damper. By slightly diminishing the pressure on the front end of the key said end will be raised by reason of the weights or leads a^2, on the rear portion, until the key is in substantially a level position, at which time the rear end of the hammer-shank will remain in the forward recess c', or depression, and will permit of repeated and very rapid strokes of the hammer against the string with the smallest degree of movement of the key, the spring b^3 serving to press the repeater B forwardly and to hold it in a vertical, yet yielding, position. As soon as the finger is removed from the key the rear portion, by reason of its gravity, will be lowered to the position shown in Fig. 1 of the drawings, which will allow the rear end of the hammer-shank to take its place in the recess c of the repeater and the lower end of the hammer to rest on the piece of felt h, or other material, on the upper surface of the key. It is apparent that the rocker may be suitably adjusted by means of the screws d, and that the screw a^4 may be extended or retracted to regulate the action of the repeater on the rear portion of the hammer-shank.

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

1. In a piano-action, the combination with a key of a rocker secured on its rear portion, a hammer-shank pivotally secured on said rocker and provided at its front end with a hammer, a spring-actuated repeater pivotally secured near the rear portion of the key and having in its front surface recesses for the reception and operation of the rear end of the hammer-shank, substantially as described.

2. A piano-action comprising a pivoted key, a rocker adjustably secured on its rear portion, a hammer-shank pivotally secured on said rocker and provided at its front end with a hammer, a spring-actuated repeater pivotally secured near the rear end of the key and having in its front portion recesses to receive the rear end of the hammer-shank, substantially as described.

3. A piano-action, comprising a pivoted key provided at its rear end with a regulating-screw, a rocker adjustably secured on the rear portion of the key, a hammer-shank pivotally secured on said rocker and provided at its front end with a hammer, a spring-actuated repeater pivotally secured near the rear end of the key and having its lower front portion forwardly inclined and adapted to contact with the regulating-screw, and provided in its front part above said inclined portion with recesses to receive the rear end of the hammer-shank, substantially as described.

4. In a piano-action, the combination of the pivoted key A, having in its rear end the recess a^3, and the regulating-screw a^4, the rocker D, adjustably secured on the key, the hammer-shank C, pivotally secured on said rocker and provided at its front end with a hammer, and an extension at its rear end, the spring-actuated repeater B, having the recesses b^7, c, and c', in its front portion, and the forwardly-inclined part b^6, in its lower part, said repeater being pivotally secured on the rear part of the keyboard, the spring-supported damper F, located above the string and provided with the depending rod f^3, the rod g', having the button g, adapted to contact with the rod f^3, and to raise the damper, all constructed, arranged and operating substantially as shown and described and for the purpose set forth.

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Witnesses:
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