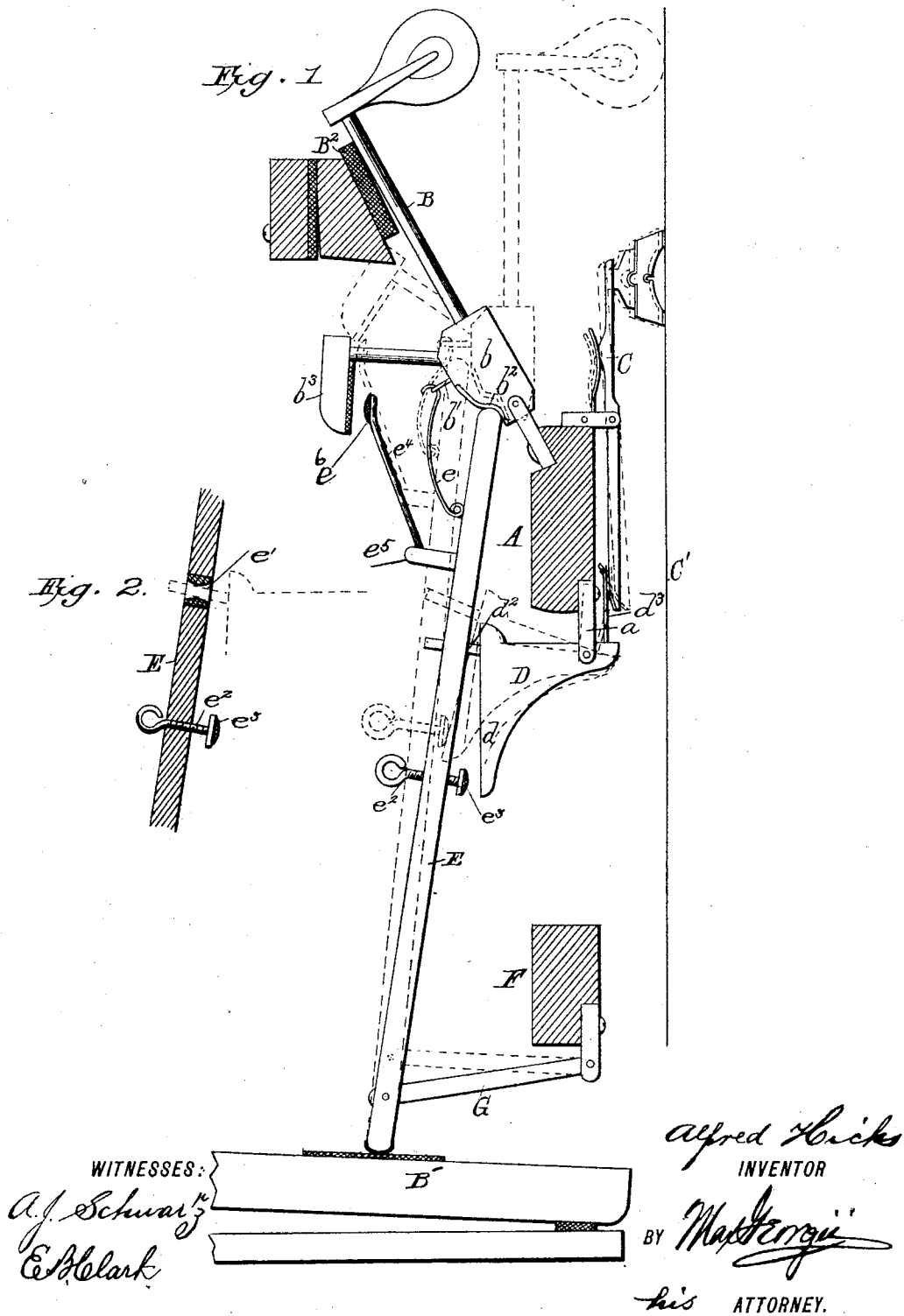


(No Model.)

A. HICKS.
UPRIGHT PIANO ACTION.

No. 482,740.

Patented Sept. 20, 1892.



UNITED STATES PATENT OFFICE.

ALFRED HICKS, OF NEW YORK, N. Y.

UPRIGHT-PIANO ACTION.

SPECIFICATION forming part of Letters Patent No. 482,740, dated September 20, 1892.

Application filed November 25, 1891. Serial No. 413,093. (No model.)

To all whom it may concern:

Be it known that I, ALFRED HICKS, a citizen of Great Britain, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Upright-Piano Actions; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to produce an action for upright pianos which shall be more simple and less liable to get out of order than those hitherto employed and which shall have the best possible responsive and repetition qualities. For this purpose my invention comprises the features and combinations of parts hereinafter set forth, and covered in the claims.

In the accompanying drawings, Figure 1 represents in sectional side elevation a piano-action embodying what I consider the preferable manner of carrying out my invention, and Fig. 2 a detail view thereof.

In the drawings, A represents the hammer-rail, to which the hammers B and dampers C, acting against the strings C', are pivotally attached in the well-known manner, as shown.

B' represents a key-lever, and directly above it is arranged the approximately-vertical sticker E, connected at its bottom to the lever-rail F by the link or sticker-lever G and abutting at its upper end against the hammer-butt b, and also connected to the said hammer-butt by a spring e, secured to the sticker E and hooked into a loop b', of mohair or other suitable material, fastened to the hammer-butt b. It will be observed that the tendency of this spring e is to always draw the upper end of the sticker under the hammer-butt b, so as to engage the cushioned shoulder b² of the well-known construction thereon. One feature of my invention consists in connecting the sticker with a throw-off device connected to and actuated by the said sticker as it rises. I preferably arrange this throw-off device in the following manner: A lever D, preferably of the triangular form shown, (though other forms could be readily devised to effect the same purpose,) is pivoted near its forward portion to a bracket or ordinary flange center a, depending from

the hammer-rail A, and its rearward heel extends down far enough to insure a sufficient outward motion for the throw-off action now to be described. Near its upper end the heel d is provided with a smooth metal or wooden pin or dowel d², engaging and working in a suitably-bushed hole e', (shown more clearly in Fig. 2,) which is a partial section of the sticker. This bushed hole is so formed and of such size as to permit the necessary play of the pin d² therein. Near the lower end of the heel d the sticker E is provided with a regulating-pin e², provided with a cushioned button e³, against which the heel d is adapted to strike. This regulating-pin is threaded into the sticker E, as shown, so that the extent of the throw-off and consequent escapement may be regulated with nicety. At the forward end of the throw-off lever D is secured a damper spoon or tripper d³ of the ordinary construction, which, when the throw-off lever D is tilted acts against the tail of the damper C and lifts it from the string C'. 75

To lock the hammer after it has been struck and to hold it in proximity to the string as long as the finger is on the key and to facilitate repetition, I secure the upwardly-extending check wire or rod e⁴ to the sticker in any suitable way, preferably by attaching it to a peg e⁵, extending out from the sticker. This check-rod e⁴ is flattened at its upper end, as shown at e⁶, and there provided with a suitable pad or cushion of leather or other suitable material, and acts in conjunction with the inner surface of the back-stop b³, attached in any suitable manner to the hammer-butt b. This inner surface of the back-stop is suitably cushioned with felt or other suitable material, so as to afford a sufficient grip to the cushioned bunter or end e⁶ of the check-rod when the latter is raised to lock the hammer. The operation of this action will be manifest from the foregoing. When the key B' is struck, it rises and, urging the sticker E upward, trips the hammer and throws it against the string I. The sticker E in rising, by reason of the pin d² engaging the hole e', rocks the throw-off lever, and, causing its heel d to strike the button e³, shifts the sticker laterally, and, causing its end to slip from under the hammer-butt d, makes the escapement. At the same time the damper-spoon d³, being 100

carried forward by the rocking lever D, lifts the damper C from the string. The check-wire e^4 , moreover, is carried directly under the inner surface of the back-stop b^3 , thus preventing the hammer from dropping back upon the hammer-rest B^3 so long as the finger is on the key, and thus facilitating the rapid repetition of the same note and affording other advantages due to the locking of the hammer. The screw-threaded regulating-pin e^2 enables me to regulate the escapement and the hammer-check action with nicety, and the spring e throws the sticker into its starting position after the key has been released. The position of the parts when the key is struck is indicated in dotted lines in Fig. 1. It is obvious that the action thus described may be modified in many particulars without departing from my invention. Thus the form of the throw-off lever and its connection with the sticker may be greatly modified. The simple sticker is, moreover, not essential, as the same principle could be applied if the sticker were shorter and a prolonged and extra guiding-lever were added to increase the

length, and similarly modifications in many other particulars may be effected. I do not, therefore, desire to be limited to the exact construction shown in illustration of my invention; but

What I claim, and desire to secure by Letters Patent, is—

1. In a piano-action, a sticker provided with a hole, as e' , in combination with a pivoted throw-off lever provided with a pin for engaging the hole in the sticker, substantially as set forth.

2. In a piano-action, the combination, with a sticker having a hole, as e' , of a pivoted throw-off lever provided with a pin for engaging the hole in the sticker and a heel, as d , for bearing against the sticker, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ALFRED HICKS.

Witnesses:

C. L. DAVIS,

EDWARD W. SEARING.