

PIANO ACTION.

Patented Mar. 28, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

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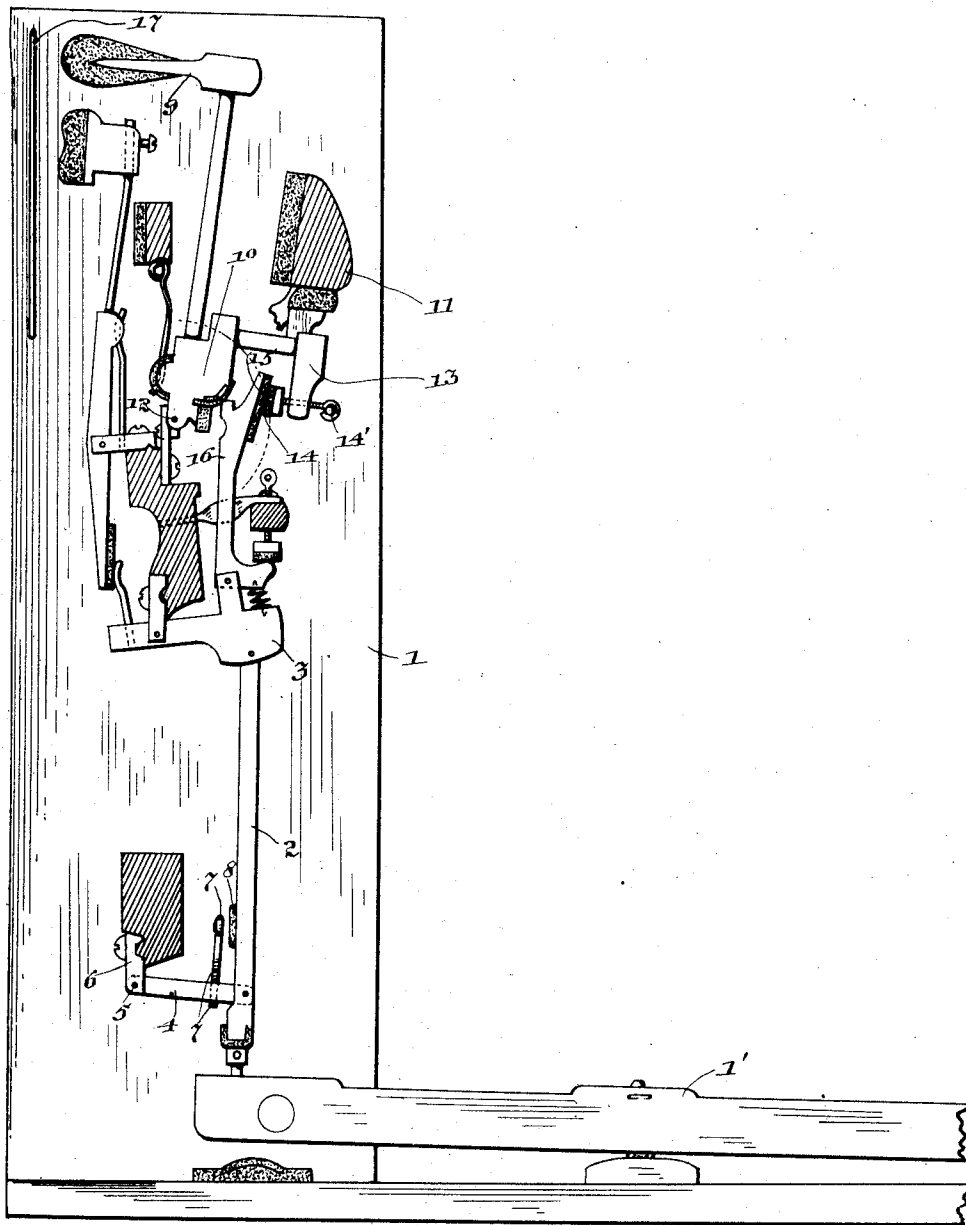
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987,723.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ROBERT M. HUTCHINSON, OF ELGIN, ILLINOIS.

PIANO-ACTION.

987,723.

Specification of Letters Patent.

Patented Mar. 28, 1911.

Application filed March 12, 1910. Serial No. 549,020.

To all whom it may concern:

Be it known that I, ROBERT M. HUTCHINSON, a citizen of the United States, residing at Elgin, county of Kane, and State of Illinois, have invented certain new and useful Improvements in Piano-Actions, of which the following is a specification.

My invention relates to improvements in upright-piano actions and has for its object the production of a piano action which shall be very compact and capable of quick repetition of the hammer blows, thus providing an action which shall be especially suitable for use in pianos having the player attachment.

A further object of my invention is to provide positive and durable means for holding the remaining parts of the action in position when the key is removed.

Other objects will appear hereinafter.

With these objects in view my invention consists in the novel construction and arrangement of parts which will be hereinafter fully described and particularly pointed out in the appended claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a side elevation of my improved piano action in its normal position, and Fig. 2 is a similar view showing the key depressed.

Referring now to the drawings 1 designates the frame, 1' the key, 2 the extension, and 3 the wippen.

4 designates the extension-guide pivoted as at 5 in the stationary member 6 at one end and to the extension 2 at the other.

The ordinary bridle tape and wire is dispensed with and substituted therefor is an adjustable screw 7 which is screwed into the extension guide 4 so that the head thereof contacts with the felt cushion 8 when the key is in normal position. This screw will hold the parts in position against the force of gravity when the key is removed for any reason.

The hammer 9 is mounted in the usual manner on the hammer-butt 10 and an ordinary hammer rail 11 is provided to limit the movement of said hammer.

The hammer-butt 10 is provided with a pivot 12 and is of considerable length vertically so that the back check supporting arm 13 will permit the back check 14 to be

in an elevated position relative to said pivot, as shown in Fig. 2. The back check 14 is provided with a padded adjusting screw 14', and a cooperating inclined face 15 is provided on the jack 16. 17 designates a piano wire. The portion of the inclined face 15 which contacts with the back check 14 is much higher than the point of contact of said jack with the hammer-butt 10, and the direction of said face is inclined to a considerable angle to the path of said back check where it intersects, the path of said back check being in a circle with the pivot 12 as a center, as indicated by dotted lines in Fig. 2. Since the jack 16 cannot move vertically or in the dotted line circle it locks the back check when it contacts therewith and restrains further movement thereof, except that which is permitted by the resiliency of the felt-contacting surfaces. The result of this construction is that the hammer is quickly and positively withdrawn from its wire after its stroke so that a quick repetition of hammer blows is permissible with no danger of the hammer failing to strike the wire causing a "cheat."

While I have shown what I deem to be the preferable form of my improved piano action I do not wish to be limited thereto as there might be various changes made in the details of construction and arrangement of parts described, and hence I desire to avail myself of such variations and modifications as fairly fall within the spirit and scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a piano, the combination with a frame, of a key; an extension adapted to be moved vertically by said key; an extension guide pivoted to said frame and to the lower portion of said extension; and an upwardly extending stop secured to said extension guide and arranged to contact with said extension upon depression of the latter, substantially as described.

2. In a piano, the combination with a frame, of a key; an extension adapted to be moved by said key; an extension guide pivoted to said frame and to said extension; and an upwardly extending screw adjustably secured in said extension guide and arranged to contact with said extension upon depression of the latter, substantially as described.

3. In a piano action, the combination with
a frame, of a key; an extension adapted to
be moved by said key; an extension guide
pivoted to said frame and to the lower por-
5 tion of said extension, an upwardly extend-
ing stop member adjustably secured to said
extension guide and arranged to contact
with said extension upon depression of the
latter; and a cushion on said extension ar-

ranged to contact with said stop member, 10
substantially as described.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

ROBERT M. HUTCHINSON.

Witnesses:

HELEN F. LILLIS,

JOSHUA R. H. POTTS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
