

UNITED STATES PATENT OFFICE.

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PIANO-ACTION.

No. 819,328.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH L. WILSON, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Piano-Actions, of which the following is a specification.

My invention relates to that portion of the piano-action relating to the mechanism for causing the hammers to strike the wires; and the objects thereof are to provide a device which will be simple in construction, positive and effective in operation, which will quickly and easily repeat no matter how rapidly the piano-key is operated either on a full or partial stroke of the key; also to provide an action in which the parts are more durable and cheaper to manufacture and have better repeating action than the piano-actions in common use. I accomplish these objects by the mechanism described herein and illustrated in the accompanying drawing, which is a side elevation of my improved piano-action.

In the drawing the rear end of the piano-key 1 carries a cup 2, having a screw-threaded shank 3, by means of which the height of the cup above the key-shank is regulated. This cup carries the lower end of the abstract 4, which is pivotally secured by pin 5 to the wippen 6. Just above the point of engagement of the abstract with the wippen a longitudinal slit 7 is cut in the wippen, so as to form of that part of the wippen to which the abstract is pivoted a spring and allow the head of the abstract to be held in spring-pressed contact with the muffle-pad 8, secured to the main body of the wippen, whereby the force of the blow struck upon the key will be borne by the top of the abstract which engages the main body of the wippen, thereby relieving any strain upon the pivotal pin which unites the abstract to the wippen. In a flange 9, secured thereto and near the front end of the wippen, is pivotally mounted jack 10. The upper end of the jack is normally held beneath hammer-butt 11 on the rear end of the hammer-shank 12 by spring 13. The throw of the jack is regulated by screw 14 in the end of the wippen bearing against the heel 15 of the jack. The wippen is pivotally mounted by pin 16 in a flange 17, secured to the frame 18, and between said flange and the connection between the wippen and abstract a rider-flange 19 is secured to the wippen. On the upper end of the rider-flange is pivotally secured the repeating-le-

ver 20. On the rear end of this repeating-lever is the shank-rest 21, which is preferably made of felt, and on the front end thereof is the butt-rest 22. These two rests support the hammer-shank and shank-butt when at rest and in playing the butt-rest moves upwardly and is always held very close to the hammer-butt, so that the jack will instantly catch the hammer-butt and cause the hammer 23 to strike the string 24. The repeating-lever is provided with regulating-screws 25 and 26, which engage a spring 27, secured to the wippen near the front end thereof. These regulating-screws and spring enable the repeating-lever to be adjusted or set in any desired position for rapid repeating. The hammer is pivoted to a flange 27, secured to the frame, and a stop 28 causes the disengagement of the jack with the hammer-butt.

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

1. In a piano-action a hammer having a butt and a shank; a repeating-lever having one end thereof contacting with the shank and the other end with the butt of the hammer; a wippen upon which said repeating-lever is pivotally mounted; a jack mounted on said wippen; means secured to said wippen to regulate the throw of said jack; and means for operating said wippen.

2. In a piano-action a hammer having a shank and a butt; a wippen; a repeating-lever carried thereby; adjusting devices in said repeating-lever; a spring secured to said wippen engaged by the adjusting devices of the repeating-lever whereby the position of the repeating-lever is regulated; and means for operating the parts.

3. In a piano-action the combination of a hammer having a shank provided with a butt and a repeating-lever having one end thereof adapted to engage the shank of the hammer and the other end to engage the butt; and means to actuate said repeating-lever.

4. In a piano-action a wippen having one portion thereof partially separated from the other portion by a longitudinal slit, whereby the lower portion forms a spring; and an abstract secured to said spring portion of the wippen and passing therethrough and contacting with the main body of the wippen whereby the same is actuated.

5. In a piano-action the combination of a

wippen pivotally secured at one end and longitudinally separated for a portion of its length, the lower portion forming a spring; an abstract carried by the spring portion of
5 said wippen and having its head engaging the other portion of said wippen; a jack carried by said wippen to regulate the movement of said jack; a hammer having a butt,
10 said butt being engaged by said jack; and a repeating-lever carried by said wippen retaining the hammer-butt in position to be instantly engaged by the jack.

6. In a piano-action a wippen having a
15 spring portion on the bottom thereof and an abstract secured to said spring portion, said

abstract contacting with the main body of the wippen whereby motion is imparted to said wippen substantially as described herein.

7. In a piano-action in combination, a 20 hammer having a shank and a butt; a repeating-lever having one end engaging the shank and the other end engaging the butt of the hammer; and means to regulate the position of the repeating-lever. 25

In witness that I claim the foregoing I have hereunto subscribed my name this 22d day of May, 1905.

JOSEPH L. WILSON.

Witnesses:

G. E. HARPHAM,
HENRY T. HAZARD.