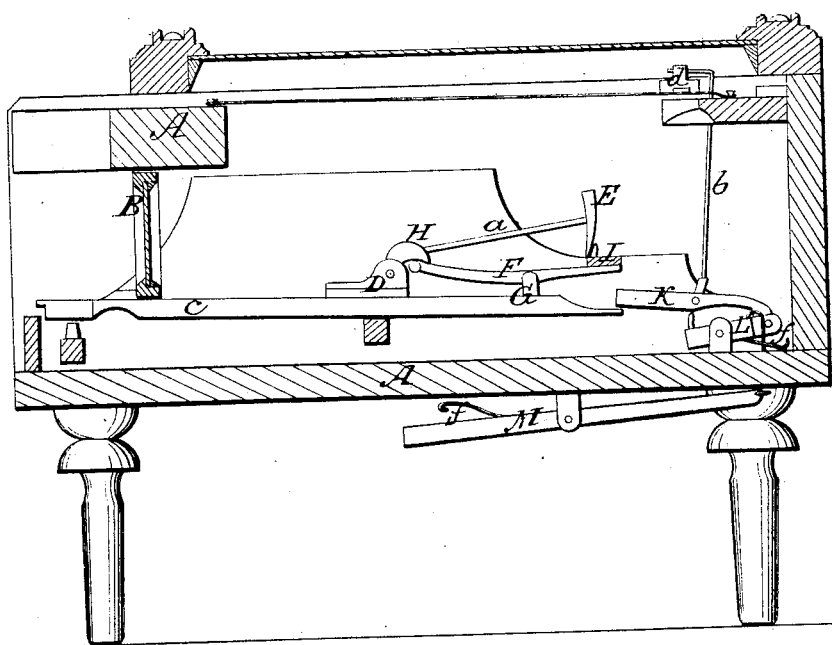


F. B. McGregor,

Piano Action.

No. 109,921.

Patented Dec. 6. 1870.



Witnesses.

*Barthus Cox
Leifred Cunt*

Inventor

*F. B. M. Gregor
per Alexander A. Mason
Atty*

United States Patent Office.

FRAZEE B. MCGREGOR, OF PONTIAC, MICHIGAN.

Letters Patent No. 109,921, dated December 6, 1870.

IMPROVEMENT IN PIANO ACTIONS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, FRAZEE B. MCGREGOR, of the city of Pontiac, in the county of Oakland and in the State of Michigan, have invented certain new and useful Improvements in Pianos; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the arrangement of an adjustable name-board and in that of the key, hammer, and damper, which several arrangements will be hereinafter more fully described.

In order to enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, referring to the annexed drawings which form a part of this specification and which represent a sectional side view of my piano.

A represents the frame of a piano made of any suitable size and material.

The name-board B in the front part of the piano consists of a frame with glass, and is made so as to be movable independent of the action, that is, it can be taken out without disturbing any part of the mechanism.

The advantages of having the name-board of glass are obvious, as by that means the operator can look into the piano without removing the top and see if anything is out of order.

The key C is supported on a cross-bar near the center of the frame, and on the upper side of the key, above the said cross-bar, a slotted block, D, is secured.

In the slot of this block one end of a semicircular block, H, is pivoted, the other end pointing toward the rear, and the under side of said block H is concave, as shown in the drawings.

A rod, *a*, is secured to the rear side of the said block H, and to the rear end of the rod *a* is fastened the hammer E.

This hammer rests on a board, I, which I call a combination bar, as by my arrangement it dispenses with two bars generally used, namely, the hammer-rest and damper-check.

On the inner or rear end of the key C is a movable fulcrum or support, G, placed, in which the lever F is pivoted.

The rear end of this lever rests against the under side of the combination-bar I, and the front end against the concave under side of the semicircular block H,

so that in pressing the front end of the key down the rear end is thrown up, which carries the front end of the lever F upward, throwing the hammer E up against the string.

It will be seen that by moving the fulcrum G either toward the inner, rear, or outer front end of the key, and then move the combination-bar I to correspond, I can get or give a light or heavy blow, according to the size and left of string to be struck.

In the rear end of the piano is pivoted the damper-frame L, in the rear side of which a lever, K, is pivoted. Said lever extends forward, and its front end rests on the rear end of the key C.

From the upper side of the lever K, and about the center thereof, a rod, *b*, connects it with the damper *d*.

It will thus be seen that at the same time as the key C operates the hammer E, it raises the damper *d* up from the string.

The damper can also be operated from the center of the lower side of the piano by means of a lever, M, pivoted by some suitable means on the bottom of the piano, and connected at its rear end by a rod, *e*, to the rear end of the damper-frame L, so that by pressing the front end of the lever M upward the front end of the damper-frame is also moved upward, and a lug or projection on the upper side thereof strikes the lever K, moving the damper up from the string.

Springs *f f* are placed under the rear end of the damper-frame and above front end of the lever M, which bring the damper back in its proper position as soon as the pressure is removed from the front end of the lever.

By the arrangements above described any part of the action can be removed for repair without taking out the whole action.

Having thus fully described my invention,

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

The combination of the key C, blocks D and H, hammer E, lever F, fulcrum G, and combination-bar I, all constructed and operating substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 1st day of July, 1870.

FRAZEE B. MCGREGOR.

Witnesses:

A. W. BURTT,

H. J. GERLS.