

*Piano Action,*

*Patented May 30, 1865.*



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## PIANO-FORTE ACTION.

Specification forming part of Letters Patent No. 47,922, dated May 30, 1865; antedated May 21, 1865.

*To all whom it may concern:*

Be it known that I, STEPHEN P. BROOKS, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Piano-Forte Action; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 represents the several parts in a state of rest before the key is depressed; and Fig. 2 indicates the position of the parts on a reduced scale, just as the hammer has struck the string.

The nature of my invention consists, first, in the combination and arrangement of the lever or hammer arm with a perpendicular standard placed firmly upon each key, as will be hereinafter described; second, in the peculiar arrangement and combination of the hammer-arm, the fly-lifter, and escapement in the rear of the said standard; third, in the method of catching the hammer by extending the lever or hammer arm through and in the rear of the standard in connection with a back catch depending from the rail.

In the drawings, A represents the key-frame, to which the key-lever B is attached in the usual manner. At a suitable point upon the key-lever is firmly secured a perpendicular standard, C, through which passes the lever or hammer arm D, and to which the latter is pivoted, so as to allow a free movement of the same, and admit of the hammer being brought up against the string represented as at E. Pivoted to the hammer-arm D in the rear of the standard is a fly-lifter, F, which extends upward, and is made to bear against an escapement formed in a groove on the under side of the rail G. Attached to the fly-lifter F by means of a regulating-screw is a stop or button, a, which, when the hammer is raised, is caused to bear against the standard, and serves to relieve the hammer from contact with the string after the blow is struck. In the rear of the fly-lifter and of the hammer-

arm is the back catch, H, which extends downward from the rail to which it is secured and against which the rear end of the hammer-arm comes in contact, so that the hammer is held firmly in position at a slight distance from the string. At the upper end of the standard C is secured a spiral spring, which connects with the fly-lifter and serves to bring the latter back to its position upon the escapement.

By this construction of parts great facility is afforded for the rapid repetition of a note, the hammer not being compelled to pass through its whole arc at each stroke, and the hammer is also prevented from rebounding against the string.

From the above it will be seen that by hinging the hammer-arm to a standard upon the key-lever and the fly-lifter to the hammer-arm the whole action is placed upon the key, thus rendering the said action very efficient and at the same time very simple.

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

1. The combination of the hammer-arm D with the standard C and fly-lifter F, in connection with the escapement on the rail G, substantially as and for the purpose specified.
2. Extending the hammer-arm through and in the rear of the standard, in connection with the back catch, H, for the purpose of holding the hammer after the blow is struck, as set forth.
3. Placing the back catch, H, in the rear of the hammer-arm, substantially in the manner and for the purpose specified.
4. The combination of the standard C upon the key-lever B, the hammer-arm D, the fly-lifter F, with the button and spring, the escapement g, and the back catch, H, substantially as shown and described.

STEPHEN P. BROOKS.

Witnesses:

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