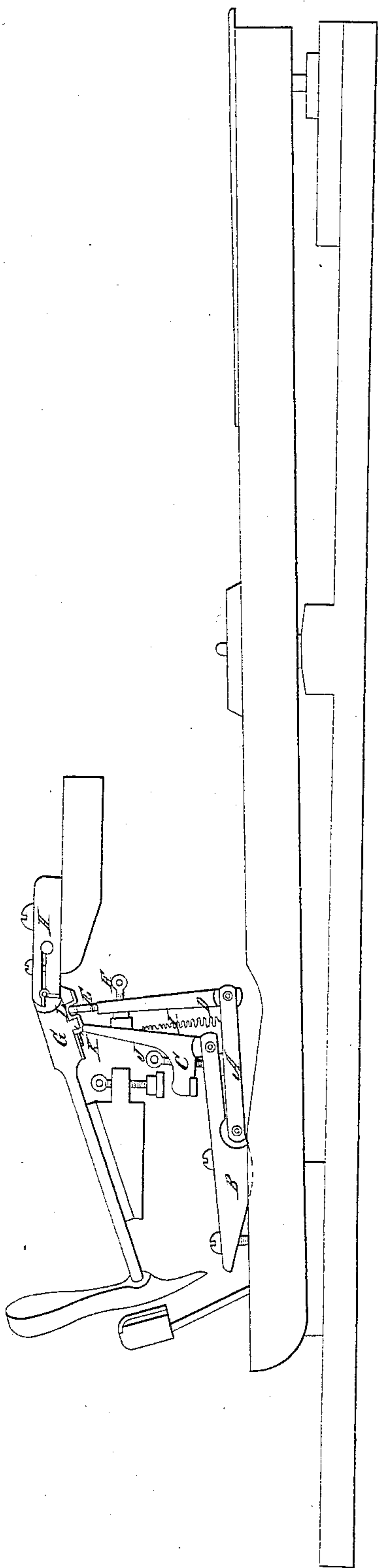


F Mathushek

Piano Action,

N^o 26,550.

Patented Dec. 20, 1859.



Witnesses:

M. Wells
Chas. Berger.

Inventor:

Tr. Mathushek.

UNITED STATES PATENT OFFICE.

FREDERICK MATHUSHEK, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND WELLINGTON WELLS, OF SAME PLACE.

PIANOFORTE-ACTION.

Specification of Letters Patent No. 26,550, dated December 20, 1859.

To all whom it may concern:

Be it known that I, FREDERICK MATHUSHEK, of the city and State of New York, have invented certain new and useful Improvements in the Pianoforte-Actions; and I hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and letters of reference marked thereon as part of this specification.

Taking the piano forte action now in use known as the French action I make the following improvements:

First: I construct a new and additional jack which I call the auxiliary jack; this is placed near the main jack and is made as follows, I attach an arm, A, by a pivot under the jack bottom, B, near its middle extending the arm outward beyond the main jack and connecting its end by a flexible joint with an upright support, D, making an elbow and together constituting the auxiliary jack. The upper end of this jack has a cross head adjusting screw, E, inserted vertically, which touches and acts against the hammer shank, G. It has also an adjusting screw, F, inserted near the upper end passing through it horizontally, the end of which is furnished with a cushion and projects against the inner side of the main jack, C.

Second Instead of the butt to the hammer shank as heretofore used I make the hammer butt straight, connecting its end by a tongue and pivot with the shank-holder, H. Under the butt I make a cushioned knuckle K against which the main jack plays and immediately behind this a cushioned groove, L, in which the end of the auxiliary jack rests. This knuckle and groove may be advantageously made by cutting a molding of that shape on a long strip of wood and then dividing it up.

Third I connect the two jacks by an elastic

spiral spring, I, extending between them from a point near the middle of the main jack down to the arm of the auxiliary jack. I am aware that the spiral spring has been used before in positions different from this.

Fourth I insert through the foot of the main jack an adjusting screw, J, which passes through an opening in the jack bottom and presses upon a cushion placed on the upper side of the arm of the auxiliary jack.

The operation and effect of these improvements are that the auxiliary jack sustains the weight of the hammer relieving the main jack and allowing it to return easily under the knuckle. It also adds stiffness and force to the blow of the hammer. The combination insures rapid and certain repetitions of the stroke with lightness of touch.

The hammer butt being straight the line of motion of the jack with the butt is direct and this gives increased power to the action. The spiral spring as here adjusted has the double effect of operating the auxiliary jack and bringing the main jack back under the knuckle. The screw J regulates the action of the auxiliary jack by pressing it downward when the hammer strikes so as to prevent the hammer from dancing against the string. The screws E, and F, serve to adjust and regulate the jacks with precision.

The invention which I claim as mine and desire to secure by Letters Patent is—

The combination of the auxiliary jack A, D, the regulating screws E, F, and J, the improved hammer butt G, and improved arrangement of the spiral spring I, with the French action, arranged substantially as herein set forth.

FR. MATHUSHEK.

Witnesses:

J. T. MILLS,
F. J. TUCKER.