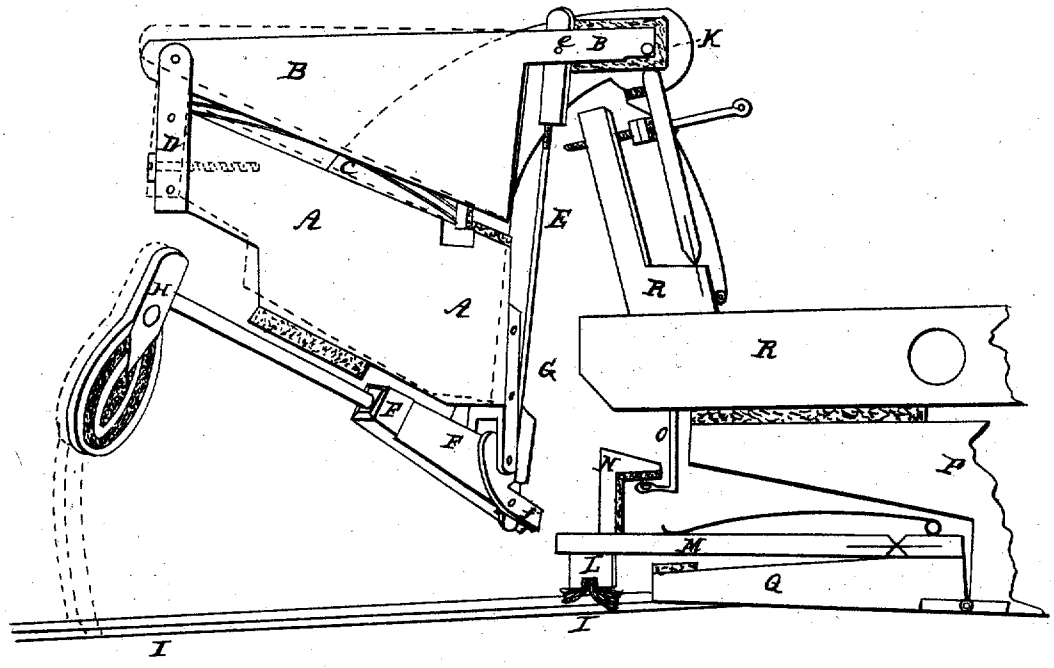
6507X

E. R. Currier,

Piano Action,

Patented Apr. 22, 1831.



AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

No. 13

April 22. 1831

Ebenezer R. Currier

6507 x

Letters Patent.

The schedule referred to in these Letter Patent and making part of the same containing a description in the words of the said Ebenezer R. Currier himself of his improvement in the horizontal square pianos forte

Know ye that I the said Ebenezer R. Currier, have invented a new and useful improvement in the horizontal square Piano forte, whereby each of the hammers is made to strike one or more of the strings belonging to its proper note at the pleasure of the performer. as is done in the horizontal grand piano forte, and by means of the said invention the following advantages of construction in horizontal piano fortes are obtained namely. First, that the key board may be placed exactly mid way of the instrument, which give the advantage of a compass of eleven octaves. and admits of greater beauty & symmetry in the exterior of the instrument. Secondly, the key frame may be supported by a brace, which is secured to the lower frame of the case by bolts, or screws passing through supporters of the brace,

Thirdly, the braces of the instrument may run in the direction of & very near to the strings, by which means the instrument may be made stronger and lighter & will keep in tune much better than upon the common construction.

Fourthly, it admits of having a larger sounding board than upon the common construction, which several advantages of construction I also claim as my invention.

And I do hereby declare that the nature of my said invention & the manner in which it is to be made & operate and be carried into effect are fully set forth in the following specification that is to say:

The action, in my piano fortes, consists of the following parts; which are arranged and combined as follows Viz: A rail which I call the hammer rail extends from the upper to the lower part of the scale of the piano forte, on the upper side of this rail I at an oblique angle

Where not to be erased

with its line of direction is placed a range of keys, which I call the hammer keys, & which with their springs are inserted in the flange, attached to the back edge of the hammer rail; and these hammer keys correspond to & are connected, as hereinafter mentioned, with the hammers which are placed on the under side of said hammer rail. The hammer keys project over the jack (which is of the usual construction) and motion is communicated to the hammer, by a connecting rod which passes down from the hammer keys, & is inserted into the end of the hammer sockets which are dovetailed under said rails by flanges with metal points.

The hammers may lie either parallel with or at a right angle or any other angle with the direction of the strings. Each hammer in its ordinary situation will strike all the strings belonging to its note; but by means of a pedal, which acts upon the hammer rail, the whole range of hammers may be instantly thrown into such a position, that each of them shall strike one or more of its proper strings at pleasure.

The hammer rail is adjusted by means of screws, which are placed in a line with the ends of the hammer levers & so that a manner that the hammers may be moved, so as to strike the strings in the manner above described without altering the point of contact between the lever & the jack. The whole construction of the action is such as to prevent the lateral recoil of the hammers.

The dampers are placed under the key frame & near the back end of each hammer socket, they damp upon the same side of the strings that is struck by the hammer; they also damp at a greater distance from the bridge than is usual in the common construction of pianos fortes, by which means the damping is more effectual; the dampers are moved by a catch upon the top of their levers, which catch is acted upon by a hook inserted into the under side of the keys & the whole of the dampers may be thrown off the strings by means of a pedal.

And I do further answer to the [illegible] a drawing of my said invention and refer to the same in manner following to wit.

A A, an end view of the hammer rail with its [illegible] on its ends by screws. B. B. the hammer levers, C the springs

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of the hammer lever, D. the flange of the hammer lever, E. the arm rising and passing from its pivot C. in the hammer lever to its pivot F. in the end of the hammer socket, E, F, G. the flange of the hammer socket H, the hammer in its natural position I I. the strings, K. one of the two pivots on which the hammer rail turns in order to move the hammers, so as to strike one or more of the strings at pleasure. L, the damper, M. the damper lever, under the key frame P. N. the damper lever catch on which the hook (O) from the key acts, O. the hook from the key, acting on the catch of the damper lever, P, the key frame, Q. the damper lever frame, R. R. the jack

In testimony that the above is a true Specification of my said improvement as above described, I have hereto set my hand & seal, this second day of April in the year of our Lord one thousand eight hundred and thirty one,

Witness

Joseph Sprague.
Geo Hood.

Ebenezer R Currier

E.R.
Ch.S.W.