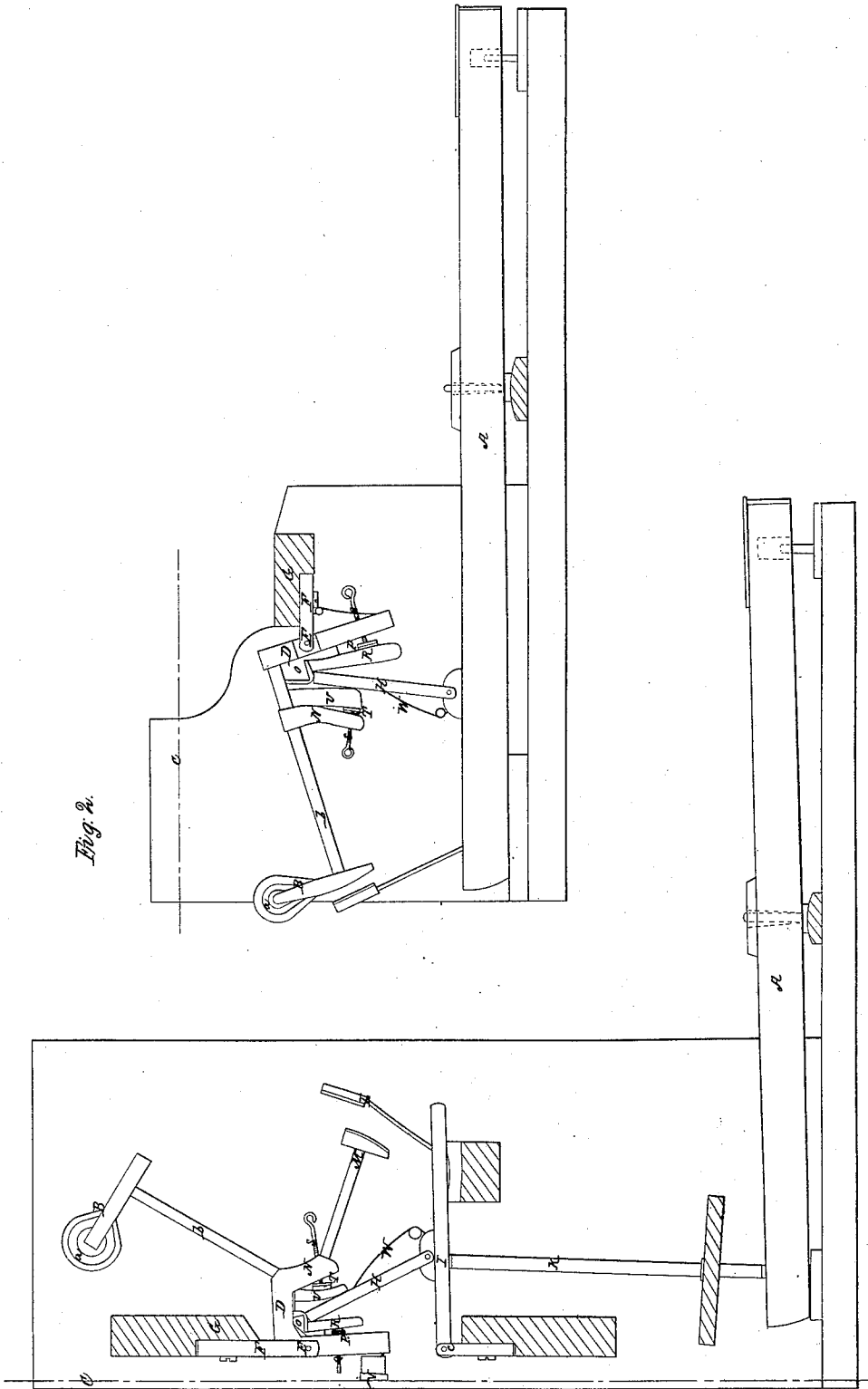


T. GILBERT.
PIANOFORTE ACTION.

No. 8,389.

Patented Sept. 30, 1851.



UNITED STATES PATENT OFFICE.

T. GILBERT, OF BOSTON, MASSACHUSETTS.

PIANOFORTE.

Specification of Letters Patent No. 8,389, dated September 30, 1851.

To all whom it may concern:

Be it known that I, TIMOTHY GILBERT, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful or Improved Pianoforte-Action; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

10 Of the said drawings Figure 1, denotes a side view of my improvements as embodied in an action for an upright piano forte. Fig. 2, shows a side view of a horizontal piano forte action, as will be hereinafter described.

15 In the said drawings A, represents the key lever, made to operate in the usual manner.

B is the hammer; C, the string against which the hammer strikes.

20 D, is the tail block of the hammer, which turns upon a pin or fulcrum, E, supported by a bearing piece F, that extends from a rail G. The hammer head is shown at *a*, while its stem is seen at *b*.

25 H, is the fly jack or escapement which in Fig. 1, is shown, as hinged to a horizontal lever I, that turns up and down upon a fulcrum or pin *c*, at one end and is raised and lowered by the key lever, acting through a bar K, that rests upon the rear end of the said key lever, and extends upward underneath and abuts against the lever I, as seen in Fig. 1. The back catch L, in Fig. 1, extends upward from the lever I, and works in connection with an arm M, that extends outward from a projection N, extending either from the tail block D, or the stem *b*, of the hammer, as seen in the drawings. The said tail block of the hammer is represented as carrying the small projection *o*, against which the top of the fly operates, for the purpose of elevating the hammer or throwing it against the string, the fly being thrown off from the part *o*, by the action of a regulating button P, which is fixed upon a screw Q, that extends through the tail block as seen in the drawings, such being common to other piano forte actions. For the purpose of damping the sound of the blow of such button against the fly, a piece of damper cloth R, or other suitable material is suspended from the tail block, and made to hang between the fly, and the button as seen in the drawings.

55 Another regulating screw S, is extended through the arm or projection N, and carries a button T, on its inner end, as seen in

the drawings, the said button being made to operate against that side of the fly, which is opposite to the side against which the button P, acts. A piece of damper cloth U, 60 is attached to the projection N, and made to hang down between the button T, and the fly H, as seen in the drawings.

The damper for the string is shown (at V in Fig. 1,) as attached directly to the tail 65 block of the hammer, or a projection therefrom. The retractive spring of the fly is seen at W, it being made to operate in the usual way.

The difference between what is termed 70 the horizontal or square piano, and the upright piano, whether a "full upright" "boudoir" or "piccolo" is well known and understood among piano forte makers, the horizontal piano forte having its strings ar- 75 ranged in or about in a horizontal plane, while the upright boudoir or piccolo has its strings arranged in an upright vertical or nearly vertical plane.

The action of the retractive power of the 80 spring W, is not always sufficient or quick enough for very rapid and successive blows of the hammer against the string. This may arise from various causes. In order to insure the return of the fly into the notch of the tail block, immediately after the blow of the hammer, on the string, and thereby secure a full blow of the hammer, or a succession of blows in a very rapid and quick 85 manner, and with the least possible liability of failure during such repetition of the blows, I employ the projection N, button T, and screw S, applied to the stem of the hammer, on its tail block, substantially in the manner, and made to operate in conjunction with the other button P, and upon the fly, as described, such button T, being made to act on the fly by a blow or percussion such as renders it sure to pass into the notch of the tail block. By such improve- 90 ment while the escapement of the fly is secured, its return under the projection *o*, or into what is usually termed the notch of the tail block is also effectually obtained and a more rapid and effective action of the hammer rendered certain. 95 100 105

In Fig. 2, is shown the application of the return screw S, and its button T, to the hammer of the horizontal action.

By the arrangement of the damper V, di- 110 rectly upon the tail block, of the hammer or a projection extending downward there-

from, we not only avoid the necessity of the
employment of extra pivots and levers, to
operate the damper, as is customary, but we
make use of the weight of the hammer to
5 aid the damper in its action upon the string.
Another advantage resulting from the said
improvement, is that the action is much
simplified, and of course less liable to get
out of order. Besides this its power of rapid
10 execution and delicacy of touch is greatly
increased.

What I claim as my invention is—

The combination of the return screw S,

and button T, or equivalent contrivance or
contrivances with the hammer, and fly, and 15
its retractive spring, so as to operate in man-
ner and in connection with the same, and
other parts, substantially as herein de-
scribed.

In testimony whereof I have hereto set 20
my signature this nineteenth day of March
A. D. 1851.

TIMOTHY GILBERT.

Witnesses:

R. H. EDDY,
BENJAMIN EDDY.