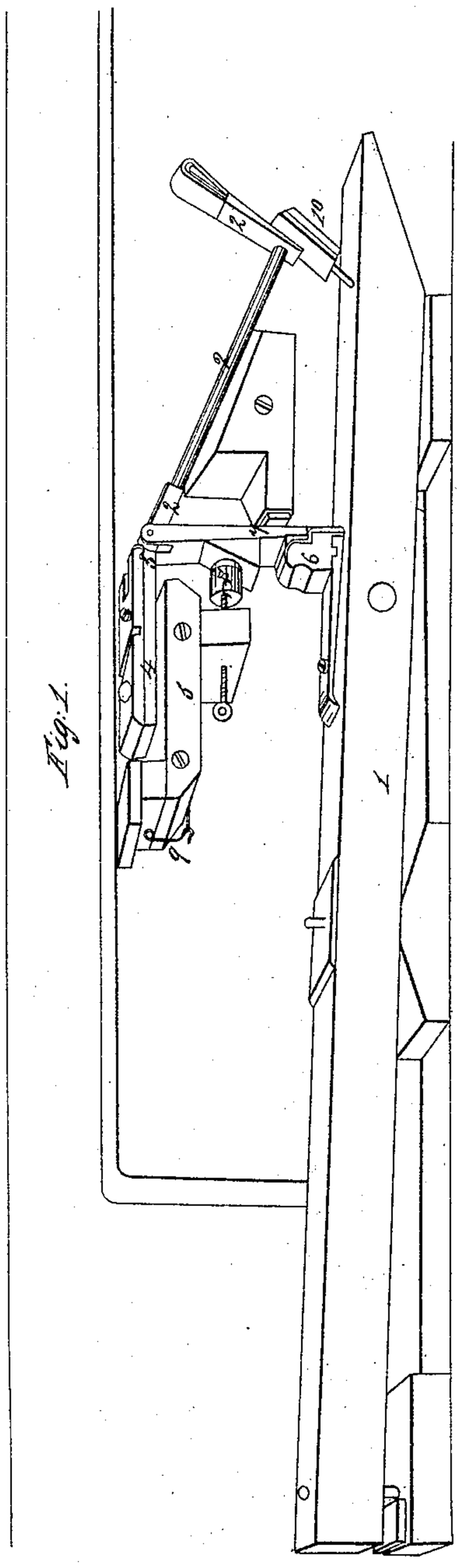
T. Loud,

Piano Action.

No. 5,086. Patented Apr. 24, 1847.



UNITED STATES PATENT OFFICE.

THOMAS LOUD, OF SPRING GARDEN, PENNSYLVANIA.

PIANOFORTE-ACTION.

Specification of Letters Patent No. 5,086, dated April 24, 1847.

To all whom it may concern:

Be it known that I, THOMAS LOUD, of the district of Spring Garden, in the county of Philadelphia and State of Pennsylvania, have invented an Improvement in the Construction of Actions of Pianofortes; and I do hereby declare that the following is a full and exact description.

My invention I denominate "the inverted grand action" and the nature of it consists in the inversion of the striking or hammer action. I do this by removing what is commonly called the "leathered hammer block" but which I have named the "striking block" from the hammer and placing it below, attaching it either to the key or to a lever connected with the key; and affixing by centers to the hammer, the movable part or front of the jack, which I center at or about three eighths of an inch from the center of the hammer, this I call the "movable lifter." It is kept to its place by a spring fastened front, so that when the key is struck, the striking block strikes and raises the movable lifter which takes on its center the hammer head to the strings, at which point the hammer is relieved and falls from the string, by a block striking an inclined plane on the front of the movable lifter which presses it off and relieves it from the striking block.

In the accompanying drawing Figure 1 represents "the inverted grand action," the respective parts of which are pointed out by the following numerals.

Reference to Fig. 1, 1, the key. 2, the hammer with its block or butt shank and hammer-head. 3, the center of hammer. 4, the capsule upon which it moves, 5, the rail to which the capsule is screwed. 6, the striking block attached to the key which raises the movable lifter and takes the hammer to the strings—it is upon this block that the blow of the end of the movable lifter is always received and upon which the relieving motion is made after the hammer has struck the string. 7, the movable lifter centered on the hammer, about three eighths ($\frac{3}{8}$) of an inch from the center of the hammer and having an inclined plane for the purpose of regulation, placed toward the regulating blocks. 8, the regulating block used for relieving the hammer when it strikes the strings, it is regulated back and front as may be necessary by a screw made on the wire to which it is fastened, said screw passing through a rail permanently attached to the hammer rail. 9, the spring which is connected with the movable lifter by a loop of silk, and is used for returning the movable lifter to its place. 10, the check which catches the hammer after it has struck the string.

The peculiarity of my improvement consists in the inverting of the situation of the striking block, and the movable lifter or front part of the jack.

In the ordinary grand action the striking block is a part of the hammer and the movable lifter forms part of the jack and is attached to the key and always strikes under the striking block of the hammer, when the hammer is lifted to the strings. In my improvement the front of the jack or movable lifter is centered to the hammer block or hammer butt and the striking block is attached to the key and strikes under the movable lifter.

The advantage I shall derive from this arrangement of the grand action independent of its simplicity, is, that the centers of the hammers are raised about half an inch nearer the line of the strings thereby reducing the under curvature made by the hammer-head in passing to the strings and preventing the under cutting in the treble end of the tuning pin or long block that would otherwise be necessary for the hammer-head to strike the string—thereby increasing the solidity and purity of tone of the instrument.

I do not wish to confine myself to any particular arrangement of the action, nor to any particular motion of the movable lifter, whether front or back, nor to any particular arrangement of leathering, whether it be the striking block or the end of the movable lifter that is leathered.

What I claim as my invention, and wish to secure by Letters Patent, is—

1. The inversion of the parts of the grand action by the attaching by centers the mov-

able lifter or front of the jack to the hammer block or hammer butt without the striking block forming part of said movable lifter or of the hammer butt and

2. The placing the striking block (which in ordinary grand actions is a part of the hammer) below aforesaid movable lifter in connection with the key, either in contact with the key, or by a lever connecting it with the same.

THOMAS LOUD.

Witnesses:
THOS. HUMPHRYS,
JACOB BROOM.