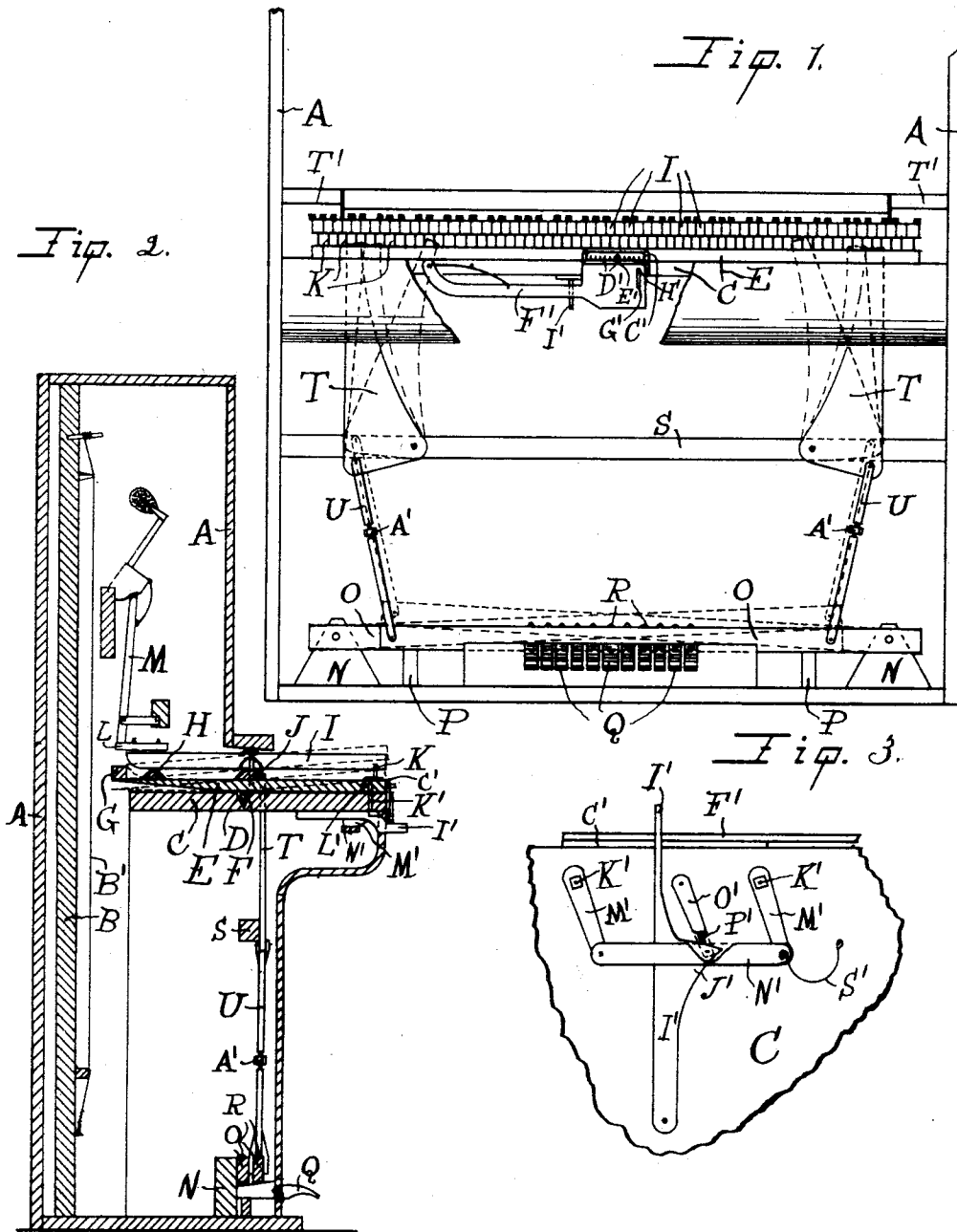


(No Model.)

A. N. ADAMS.
PIANO.

No. 541,913.

Patented July 2, 1895.



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PIANO.

SPECIFICATION forming part of Letters Patent No. 541,913, dated July 2, 1895.

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To all whom it may concern:

Be it known that I, ALFRED N. ADAMS, a citizen of the United States, residing at Stockton, in the county of San Joaquin and State of California, have invented certain new and useful Improvements in Pianos; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to certain improvements in key-board musical instruments, preferably pianos and it consists in the peculiar construction, novel combination and adaptation of parts hereinafter described and specifically pointed out in the claims appended. Referring to the accompanying drawings, Figure 1 is a front elevation of a piano having my invention attached thereto, such piano having the front board removed and the top broken away. Fig. 2 is a vertical cross sectional view of the same. Fig. 3 is an inverted plan view of the key-board detacher and raiser.

Similar letters of reference indicate corresponding parts throughout the several views.

A represents the case of a piano and B represents the string frame which is suitably attached to such piano case. To the string-frame B, the strings B' are suitably attached.

C represents a frame or shelf which is located on, and suitably attached to the front of the piano and is provided with a V shaped groove D near the center of the same, which groove extends the entire length of such frame C. A key-board E is provided, on its bottom side with a cleat F which extends the entire length of the key-board E and is adapted to engage with the groove D. The rear side of the key-board E is made thin for the purpose of allowing the same to be tilted rearwardly.

G represents a bar which is suitably attached to the case A immediately above the rear edge of the key-board E which engages with the bar G when the key-board E is in its normal position.

H is a lining of felts upon which the keys I, which are of common construction, recline.

J represents the bar usually employed in pianos, over which bar J the keys I rock.

K represents the guide pins which engage the front end of the keys I.

L represents the key-rockers which are suitably attached to the rear end of the keys I, such key-rockers L being adapted to engage the lifters M of the piano actions, which when operated by means of the keys I, strike or engage the strings B'.

N represents blocks which are rigidly attached to the bottom of the piano near the ends of the same, to which blocks N horizontal levers O are pivotally attached. Such levers O are provided with rest blocks P at their free ends.

Q represents pedals of any suitable number, which are pivotally attached to and near the center of the bottom of the piano case A. Such pedals Q are adapted to engage with the under side of the levers O, which are provided with adjusting screws R which are adapted to regulate the height to which the levers O may be raised by means of the pedals Q.

S represents a cross-bar which is attached at either end to the piano case A, to which cross-bar S, two vertical levers T are pivotally attached near the ends of the same, such levers T being actuated by means of connecting rods U which are pivotally attached at one of their ends to the free ends of the levers O and at their other ends to the outer edge of the levers T. Such rods U are provided with adjusting screws A' which are adapted to regulate the vibration of the levers T, which levers T are adapted to engage the ends of the key-board E for the purpose as will be shown.

C' represents a guide-plate which is rigidly attached to the front side of the frame C such plate C' being provided with corrugations D' which are engaged by a guide-pin E'. F' represents a shifting plate or lever which is pivotally attached at one end to the front side of the frame C and is adapted to be vertically adjusted by means of a slot G' and pin H' which pin is inserted in the side of the frame C and is adapted to engage the slot G'. The lever F' is actuated by means of a thumb lever I' which is adapted to engage the lower edge of the lever F'. The lever I' is pivotally attached to the under side of the frame C and is provided with a lug J' which has one side curved for the purpose as will be shown.

K' represents clamp-pins which are inserted

in a slot L' in the key-board E near the front side of the same. Such pins K' are curved at their upper ends and are adapted to engage the slots L' for the purpose as will be shown.

5 The pins K' are rigidly attached to levers M' which have their outer ends pivotally attached to a connecting bar N' which is provided with an actuating lever O' which is flexibly attached to the bar N' and pivotally attached to the frame C which lever O' is provided with a shoulder P' which is adapted to engage the lug J'.

10 S' is a spring which maintains the pins K' and levers M' in position when they are at rest.

15 The end pieces T' are adapted to be vertically adjusted when the key-board is being transferred from one key to another.

20 The mode of operating my improved piano is as follows: The key-board E being in its normal position and it being desired to play a piece of music in a higher or lower key or pitch, the operator grasps the lever I' and presses it toward the right which movement, turns the pins K', thus releasing the key-board E, and also raises the lever F', which engages the pin E' and raises the front end of the key-board E; whereupon the operator presses the pedal Q corresponding to the key or pitch in which it is desired to play the piece, whereupon the pedal Q raises the levers O thus communicating the movement to the levers T by means of the rods U, which levers T engage the ends of the key-board E and cause it to move to the desired key or pitch when the lever F' is pressed back to its normal position permitting the key-board to drop into position and the thumb lever I', is pressed back to its normal position whereupon the spring S' presses the levers M' and pins K' into a position which maintains the key-board E rigidly in position until released again by the pressure against the lever I'. The above *modus operandi* is repeated for each different key or pitch by pressing a different pedal Q thereby changing the key board to different and desired positions.

50 My invention may be applied to organs as well as pianos but I have here shown it applied to a piano only.

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

1. In a piano or other key board instrument, the combination of an endwise-movable key-board fulcrumed so as to enable it to rock in the direction of its width, an adjustable device for securing the key board against rocking or vertical movement, a device for securing the keyboard against endwise movement when it is secured against rocking movement, a device for raising the forward or outer edge of the key board when the same is released, so as to permit of said key board being moved endwise, and means for moving the key board

endwise or in the direction of its length, substantially as and for the purpose specified.

2. In a piano or other key board instrument, the combination of an endwise movable key-board fulcrumed so as to enable it to rock in the direction of its width, an adjustable device for securing the key board against rocking or vertical movement, a device for securing the keyboard against endwise movement when it is secured against rocking movement, a device for raising the forward or outer edge of the key board when the same is released so as to permit of said key board being moved endwise, a pedal, and mechanism for moving the key board connected with and adapted to be actuated through the medium of the pedal, substantially as specified.

3. In a piano the combination with the case, string-frame, strings and piano-action of a frame suitably mounted on the front of the piano, such frame being provided with the groove D, the key-board E, provided with the cleat F, mounted on such frame, the keys I suitably mounted on the key-board E, the levers M' and O', the bar N', the lever I', the spring S', the guide plate C' and the lever F' pivotally attached to the frame C, all arranged and operating substantially as shown and described.

4. In a piano the combination with the strings, action and case of the frame C, suitably mounted on the front of the piano, such frame C being provided with the groove D, the key-board E suitably mounted on the frame C, suitable means for tilting such key-board E, the levers T adapted to engage the ends of the key-board E, such levers T being pivotally mounted on the bar S, the connecting rods U adapted to engage with the levers T and O, the levers O pivotally attached to the blocks N, such blocks N rigidly attached to the bottom of the piano, the pedals Q adapted to engage the levers O, and the adjusting screws R suitably inserted in the levers O, all arranged and operating substantially as shown and described.

5. In a piano the pin K' adapted to engage the key-board, the levers M' rigidly attached to the lower ends of the pins K', the bar N' flexibly attached to the outer ends of the levers M', the levers O', provided with the shoulder P', the spring S' adapted to engage the bar N', the lever I' provided with the lug J', the guide frame C', suitably attached to the frame C and the lever F' pivotally attached to the frame C in combination with a suitable key-board, piano-action and strings all arranged and operating substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

ALFRED N. ADAMS.

Witnesses:

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