

(No Model.)

2 Sheets—Sheet 1.

T. GIDDINGS.
TOY PIANO.

No. 574,677.

Patented Jan. 5, 1897.

Fig. 1.

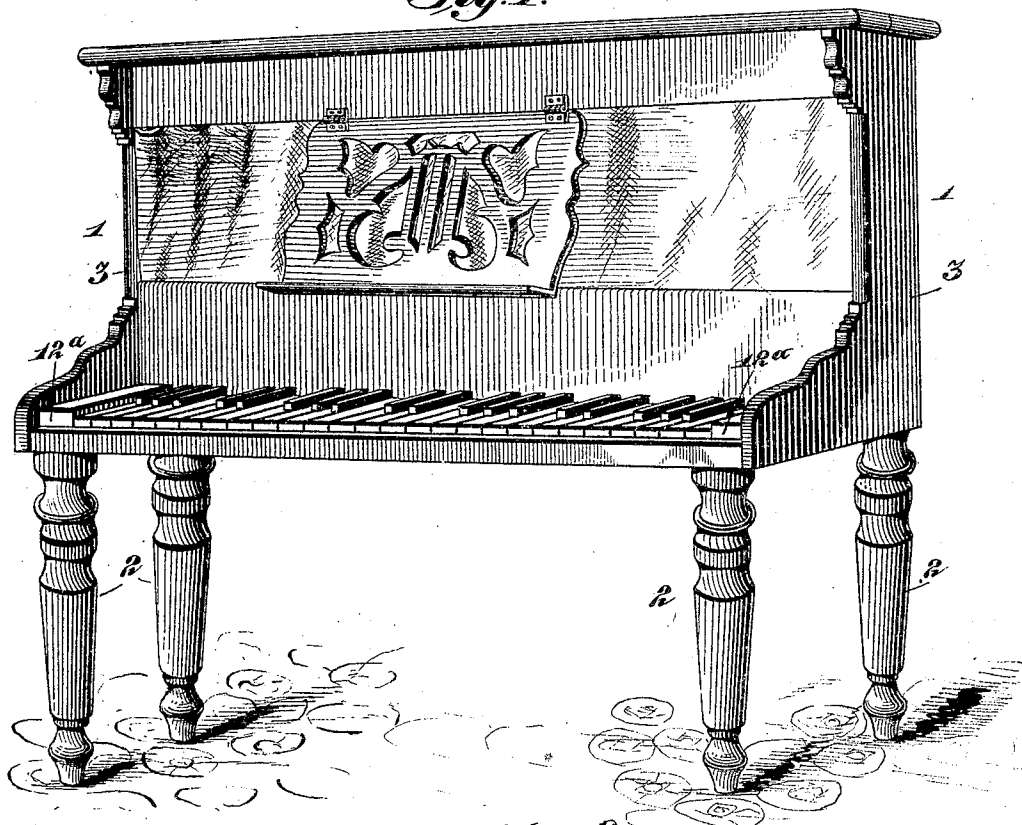
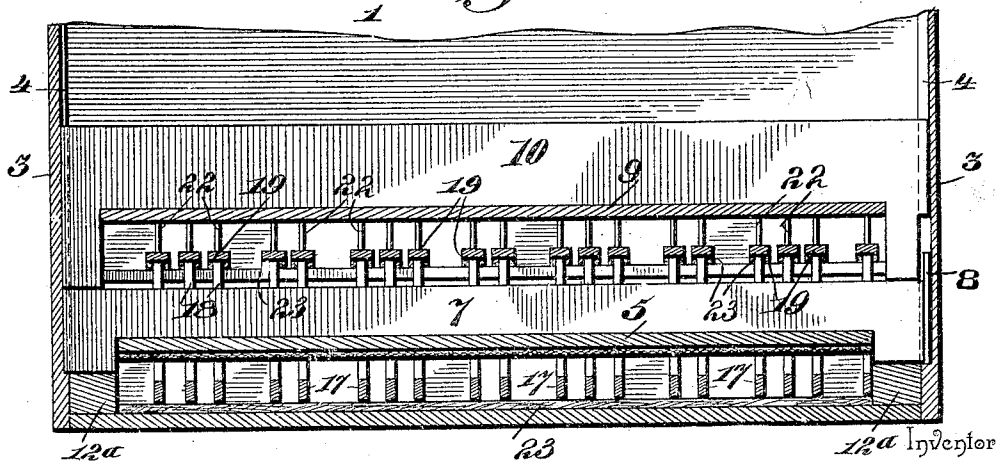


Fig. 2.



Thomas Giddings.

Witnesses

H. G. Dieterich.
R. M. Smith.

By *his* Attorneys,

C. A. Snow & Co.

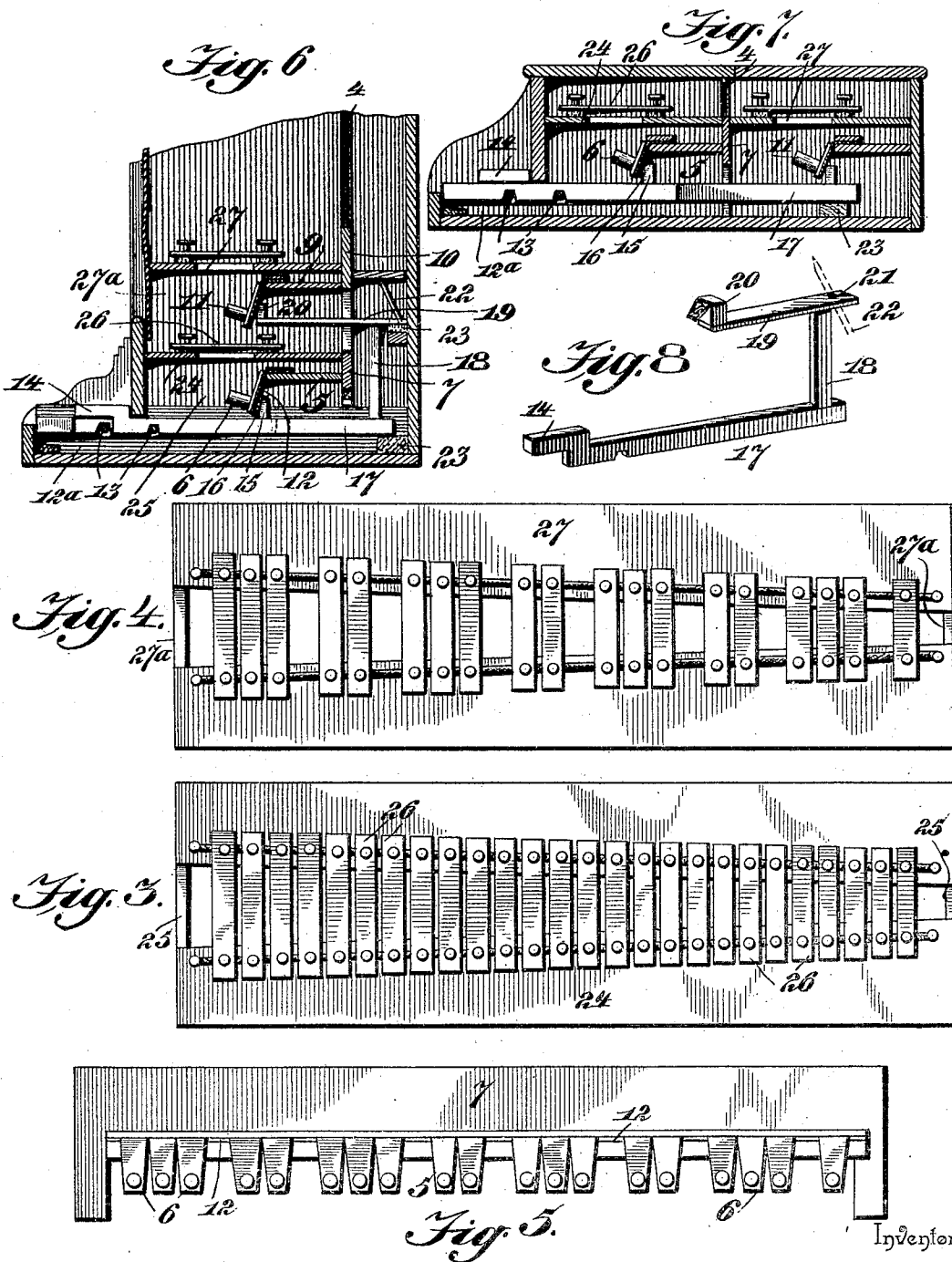
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UNITED STATES PATENT OFFICE.

THOMAS GIDDINGS, OF WILLIAMSPORT, PENNSYLVANIA.

TOY PIANO.

SPECIFICATION forming part of Letters Patent No. 574,677, dated January 5, 1897.

Application filed August 24, 1896. Serial No. 603,751. (No model.)

To all whom it may concern:

Be it known that I, THOMAS GIDDINGS, a citizen of the United States, residing at Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Toy Piano, of which the following is a specification.

This invention relates to toy pianos; and the object in view is to provide a simple, cheap, and efficient piano for the use of children in which semitone-keys or sharps and flats are employed in connection with the natural scale, whereby several complete octaves are obtained, enabling music written in the various keys to be played with equal facility upon the instrument. In pianos of this class heretofore placed on the market only the natural key of C has been provided on account of lack of space and the room taken up by the sounding keys or bars. By means of this invention two independent action-boards are provided, one containing the keys constituting the natural scale of C and the other containing the semitones or sharps and flats. These boards are arranged one above the other where an upright case is employed, or one in rear of the other and in approximately the same horizontal plane where the ordinary flat case is employed.

Another aim of the present invention is to so construct the case and the various parts of the piano that said parts may be readily disassociated and removed from the case for repairs, &c.

Other objects and advantages of the invention will appear in the course of the subjoined description.

The invention consists in a toy piano embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and incorporated in the claims here-to appended.

In the accompanying drawings, Figure 1 is a perspective view of a toy piano constructed in accordance with the present invention. Fig. 2 is a longitudinal section through the same, illustrating the manner of removably fitting the action-bar and guard in the case. Fig. 3 is a plan view of the action-board containing the natural scale. Fig. 4 is a similar view of the other action-board, containing the

semitones or sharps and flats. Fig. 5 is a front elevation of one of the action-bars and guards. Fig. 6 is a cross-section through the piano, showing the action. Fig. 7 is a similar view showing the action arranged for a flat case. Fig. 8 is a detail perspective view of the semitone-action employed in the construction shown in Fig. 6.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the drawings, 1 designates the case of the piano, which may be mounted upon suitable legs 2, or these legs may be omitted, adapting said case to be placed upon a table or other horizontal support. The case comprises the end walls or pieces 3, and these are provided upon their inner adjacent surfaces with vertical grooves 4 of different depth, one groove being approximately twice the depth of the other.

5 designates the action-bar, to which the lower series of hammers 6 are pivotally attached, and 7 is the action-bar guard. The guard 7 fits at its opposite ends into the grooves 4, and is made of a length which will admit of one end of the bar being inserted into the deeper groove 4, after which the opposite end of the guard may be inserted in the shallow groove. The guard 7 is now moved in the direction of the shallow groove, and then a wedge 8 is inserted in the deep groove behind the edge of the guard, thus securing said guard firmly in place. By reversing the operation just described the guard 7, with the action-bar and hammers, may be removed.

The upper action-bar 9 and its guard 10 are introduced and removed through the top of the case, the opposite ends of the guard 10 being adapted to slide up and down in the grooves 4 above referred to. The hammers 11 of the upper action-bar, as also the lower set of hammers, are secured to their respective action-bars by one or more pieces of fabric 12, which is secured to the action-bar in any convenient manner, and the hammers are glued or secured in any desired manner to the projecting edge of this fabric, as clearly shown in Fig. 6.

At each end of the case is an end piece or bar 12^a, made preferably of hard wood and

adapted to receive the supporting-legs 2 above referred to. Between the end pieces 12^a extend parallel wires 13, which form the fulcrums for the key-levers. These key-levers are arranged in a manner similar to an ordinary piano, comprising the white keys of the natural scale of C and the black keys representing the semitones or sharps and flats. The key-levers of the natural scale are notched on their under sides, so as to fulcrum on the front wire, and are provided in rear thereof with other notches, which embrace the rear wire 13. The semitone-levers are notched on their under sides to receive the rear wire 13, which forms their fulcrum, and the front ends of said levers are shaped, as shown at 14 in Fig. 8, so as to extend over the forward wire 13 and admit of the necessary vibration of the said levers without interfering with the forward wire. At their rear ends the key-levers of the natural scale are provided with blocks 15, having arranged over their forward corners pieces of felt or other similar material, (indicated at 16,) which act as sound-deadeners and receive the impact of the hammers on their return movement. Upon the upward thrust of the block 15, caused by depressing the lever to which it is attached, the hammer will be thrust upward, so as to strike the under side of its respective sounding-key, which is arranged directly thereover.

The semitone-levers (indicated at 17) are provided at their rear ends with uprights 18, to the upper end of which are secured cross-bars 19, having at their forward ends blocks 20 for acting on the hammers and provided at their rear ends with longitudinal slots 21, by which they are adapted to embrace and slide up and down on guides 22, which may be composed of wire and which serve to steady the movements of the cross-bars. Adjacent to the rear wall of the case and upon the inside thereof are arranged cushions 23, of felt or other suitable material, forming sound-deadeners for the key-levers and cross-bars in their downward movement.

24 designates the lower action-board, which is preferably composed of spaced pieces, secured at their ends to supports 25, which rest upon the end pieces 12^a and sustain the action-board at the proper elevation. Metal keys 26 extend across the central space in the action-board and are secured in place in the ordinary manner, one key being arranged above each hammer of the lower series actuated by the key-levers of the natural scale. The second action-board 27 is constructed in a manner similar to the first one described, and where employed in the upright case is arranged over the board 24, being supported at the proper elevation by the end pieces or supports 27^a, which rest upon the lower action-board. The upper board 27 is supplied with metal keys representing the semitones or sharps and flats, said keys being arranged directly over and in the path of movement of their respective hammers.

From the foregoing description it will be seen that a manual is provided which corresponds to that of an ordinary piano, the same containing several complete octaves, including all the keys, both natural and semitone. This enables any piece of music, written in any key, to be played upon the instrument and greatly increases the utility and attractiveness of the same. In some cases it may be desirable to provide a flat case, as shown in Fig. 7, instead of an upright one, as shown in Fig. 6. In this event one action-board is arranged in rear of the other and preferably in the same horizontal plane, and for the sake of cheapness and simplicity the action described in connection with the key-levers of the natural scale is employed in connection with those of the semitone scale. This and other changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what is claimed as new is—

1. In a toy piano, the case thereof provided in its end walls with vertical grooves, in combination with the action-bar and its guard, the latter having its ends slidably mounted in said grooves and adapted to be removed through the top of the case, substantially as described.

2. In a toy piano, the case thereof provided in its end walls with vertical grooves of different depths, in combination with an action-bar and guard, said guard having its ends removably fitted in said grooves and adapted to be disengaged laterally therefrom, and a wedge adapted to be inserted in the deeper groove behind the adjacent edge of said guard, substantially as and for the purpose described.

3. In a toy piano, the combination with two sets of key-levers for the natural and semitone scales, of two action-boards, one for each set of levers, each of said boards being provided with end supports, the supports of the upper action-board resting upon the lower board, and both of said boards being made removable, substantially in the manner and for the purpose described.

4. In a toy piano, the combination with an action-board, and a series of sounding plates or keys thereon, of an action-bar, a series of hammers pivoted thereto and underlying the action-board, key-levers located beneath said hammers and each provided at its rear end with an upright, a cross-bar secured to said upright and extending forward, a block secured to the front end of said cross-bar and carrying a sound-deadener for contact with its respective hammer, and a guide-pin arranged within the case and projecting through a slot in the rear end of said cross-bar, whereby the movements thereof are steadied, substantially as described.

5. In a toy piano, the combination with the action-bar, of a hammer and a piece of fabric

attached to and projecting beyond the edge
of said action-bar, said fabric being secured
to and covering the under side of the hammer
so as to form a sound-deadener and provide a
5 pivotal connection between said hammer and
action-bar, substantially as described.

6. In a toy piano, the key-levers 17 having
the elevated key portion 14 and fulcrumed
upon a cross-wire, the upright 18, the for-
10 wardly-extending bar 19, the end block 20,

the bar 19 provided with a slot in its rear
end, and the guide 22, substantially as de-
scribed.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in 15
the presence of two witnesses.

THOMAS GIDDINGS.

Witnesses:

JOHN H. SIGGERS,

THEODORE DALTON.