

A. KRELL.
 PANEL OPERATING DEVICE.
 APPLICATION FILED JULY 11, 1910.

1,015,029.

Patented Jan. 16, 1912.

Fig. 1.

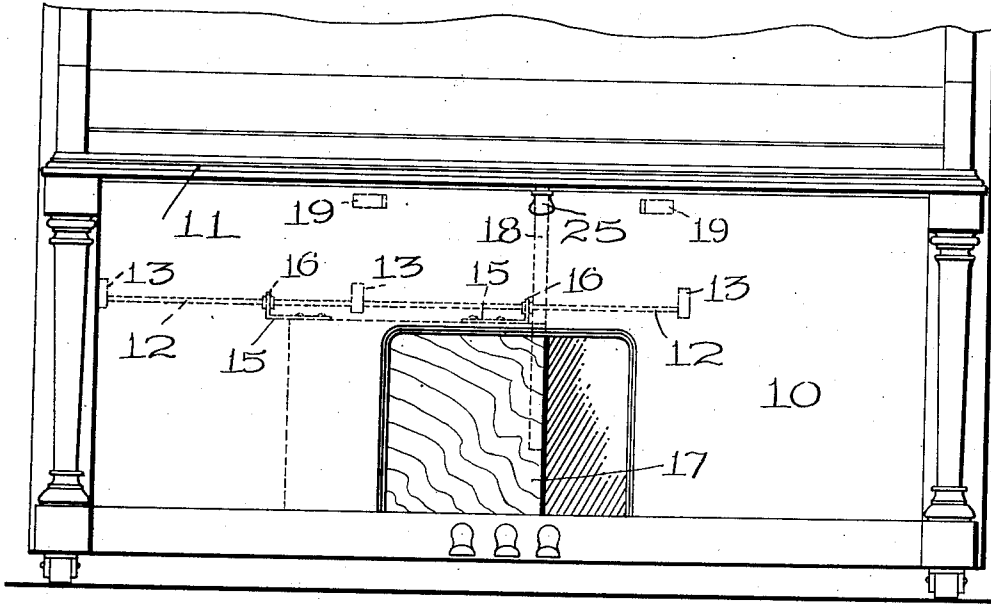


Fig. 3.

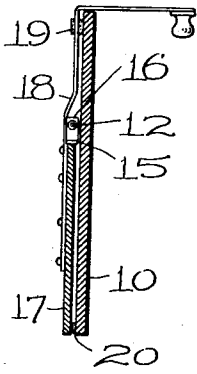
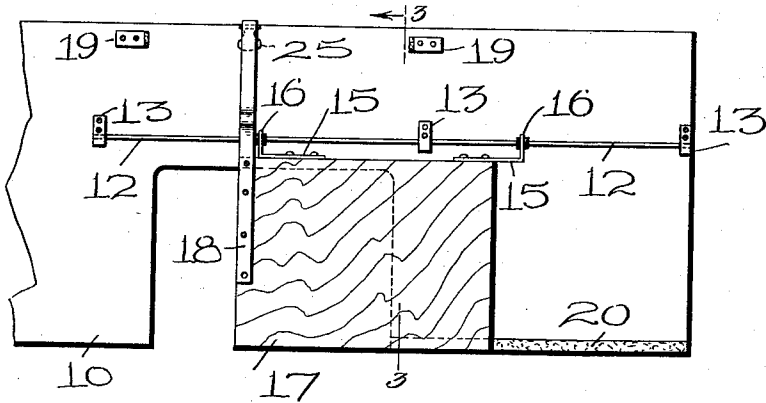


Fig. 2.



Witnesses:
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 Albert Krell
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UNITED STATES PATENT OFFICE.

ALBERT KRELL, OF CONNERSVILLE, INDIANA, ASSIGNOR TO KRELL AUTO-GRAND PIANO CO. OF AMERICA, OF CONNERSVILLE, INDIANA, A CORPORATION OF INDIANA.

PANEL-OPERATING DEVICE.

1,015,029.

Specification of Letters Patent.

Patented Jan. 16, 1912.

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To all whom it may concern:

Be it known that I, ALBERT KRELL, a citizen of the United States, residing at Connorsville, in the county of Fayette and State of Indiana, have invented a new and useful Panel-Operating Device, of which the following is a specification.

This invention relates to a sliding panel for musical instruments.

The principal objects of the invention are to provide a construction particularly adapted for the bottom sliding door or panel and of greatly simplified construction whereby the first cost will be very small and the expense for repairs will be reduced to a minimum; and to provide such simplified mechanism of such a form that the panel can be manipulated very easily by means of a handle rigidly connected with the panel and projecting out under the key bed.

Reference is to be had to the accompanying drawings in which—

Figure 1 is a front elevation of a portion of a piano showing a preferred form of this invention. Fig. 2 is a rear elevation of the same; and Fig. 3 is a sectional view on the line 3—3 of Fig. 2.

The bottom board 10 of the piano is usually spaced at the top from the bottom of the key bed 11. This space is utilized in this invention as will appear hereinafter. Just above the opening in the bottom and on the inner side thereof is located a stationary horizontal bar 12 preferably supported by three cleats 13 secured to the back of this board. Slidably mounted on this rod are a pair of L-shaped brackets 15, each having an up-turned flange 16 provided with a perforation. These perforations are shown as packed with felt. The long leg of each of these brackets is secured to the top of the sliding panel 17. The central one of the cleats is so located that when the panel is closed the upturned flange on one of the brackets will engage it and when it is opened the flange on the other bracket will engage it. Thus this cleat forms a stop for the door in both directions.

In order to operate the panel it is provided with a sheet metal piece 18 secured at one end to the rear thereof and extending upwardly over the rod and then inwardly almost into contact with the back of the board. This sheet metal piece then extends outwardly at right angles so as to

form an arm projecting over the top of the board through the space between it and the bottom of the key bed. This arm is provided with a downwardly extending knob or handle 25 on the front end thereof for manipulating it. It will be seen that this handle is located in a very convenient position just under the key-bed adjacent to the expression manipulatory devices, and that it is rigidly connected with the panel. In this way the operator can find the handle very easily without reaching far from the place at which he is accustomed to operate the other levers. It will be seen also that by this construction the use of swinging levers and pivotal connections is entirely done away with and there are no joints that are likely to become loose even after long service. Moreover the panel hangs down by gravity from the guide rod and thus this rod serves both to guide the panel and to support it. A couple of additional stops are shown for the handle. These are so arranged that they come into contact with the handle at the same time that the brackets on the panel come into contact with the central cleat. In this way it is not possible to strain the parts by trying to move the handle after the panel has come to its stop. This is another source of economy in repair.

The bottom board of the piano is provided with a longitudinal bearing piece of felt 20 at the bottom thereof for engaging the bottom of the panel when it slides open.

While I have illustrated and described a preferred embodiment of the invention I am aware that many modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore I do not wish to be limited to all the details of construction herein shown and described, but

What I do claim is:—

1. In a panel operating device for a musical instrument, the combination of a horizontal supporting rod, a panel having brackets provided with upwardly extending projections having perforations hung on said rod whereby said panel is supported from the rod, and three cleats for supporting the rod, the central one of said cleats being located in position to engage the brackets at the opposite ends of the stroke of the panel.

2. In a panel operating device for a musical instrument having a bottom board and key bed, the combination of a horizontal supporting rod, a panel having brackets provided with upwardly extending projections having perforations hung on said rod whereby said panel is supported from the rod, cleats for supporting the rods, and a handle rigidly mounted on the panel and projecting upwardly therefrom and extending out above the top of the bottom board between it and the key-bed.

3. In a panel operating device for a musical instrument having a bottom board, the combination of a horizontal supporting rod, a panel having brackets provided with upwardly extending projections having perforations hung on said rod whereby said panel is supported from the rod, three cleats for supporting the rod, the central one of said cleats being located in position to engage the brackets at the opposite ends of the stroke of the panel, and a handle rigidly mounted on the panel and projecting upwardly therefrom and extending out over the top of the bottom board.

4. In a panel operating device for a musical instrument, the combination of a horizontal supporting rod, a panel having brackets provided with upwardly extending projections having perforations hung on said rod whereby said panel is supported

from the rod, three cleats for supporting the rod, the central one of said cleats being located in position to engage the brackets at the opposite ends of the stroke of the panel, a handle rigidly mounted on the panel and projecting upwardly therefrom, and having a downwardly extending knob on the outer end thereof, and a pair of stops for said handle, said stops being located in position for the handle to engage them when the brackets engage the middle cleat.

5. In a panel operating device for a musical instrument having a bottom board, the combination of a horizontal supporting rod, a panel having brackets provided with upwardly extending projections having perforations hung on said rod whereby said panel is supported from the rod, a handle rigidly mounted on the panel and projecting upwardly therefrom and extending out at the top of the bottom board, and having a downwardly extending knob on the outer end thereof, and a pair of stops on the bottom board near the top thereof for said handle.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

ALBERT KRELL.

Witnesses:

EDWIN B. PFAU,
M. E. CRAMER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."