

W. H. MILLER & F. FULLER.
 PEDAL ACTION FOR PIANOFORTES.

No. 179,811.

Patented July 11, 1873.

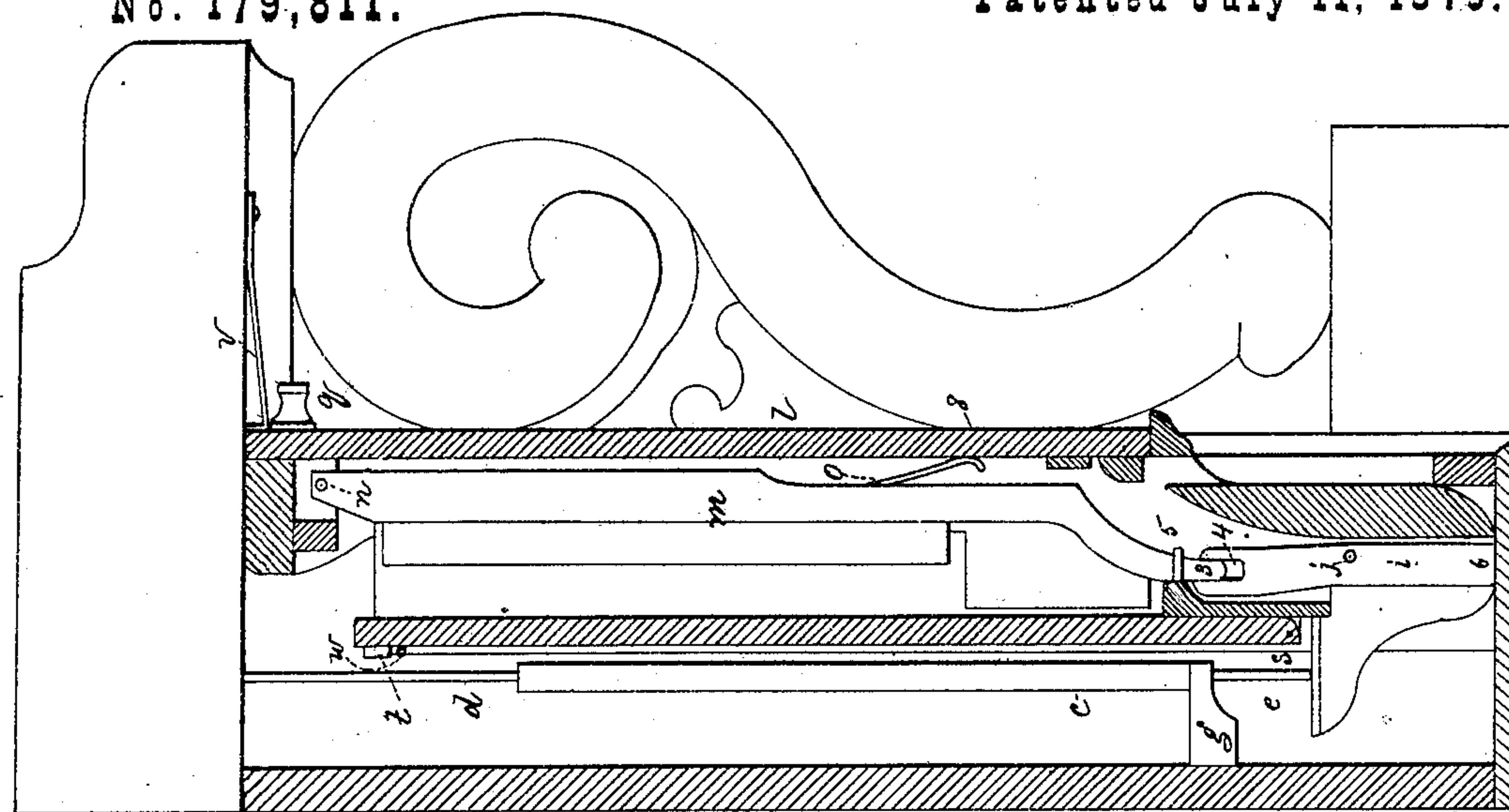


Fig. 3.

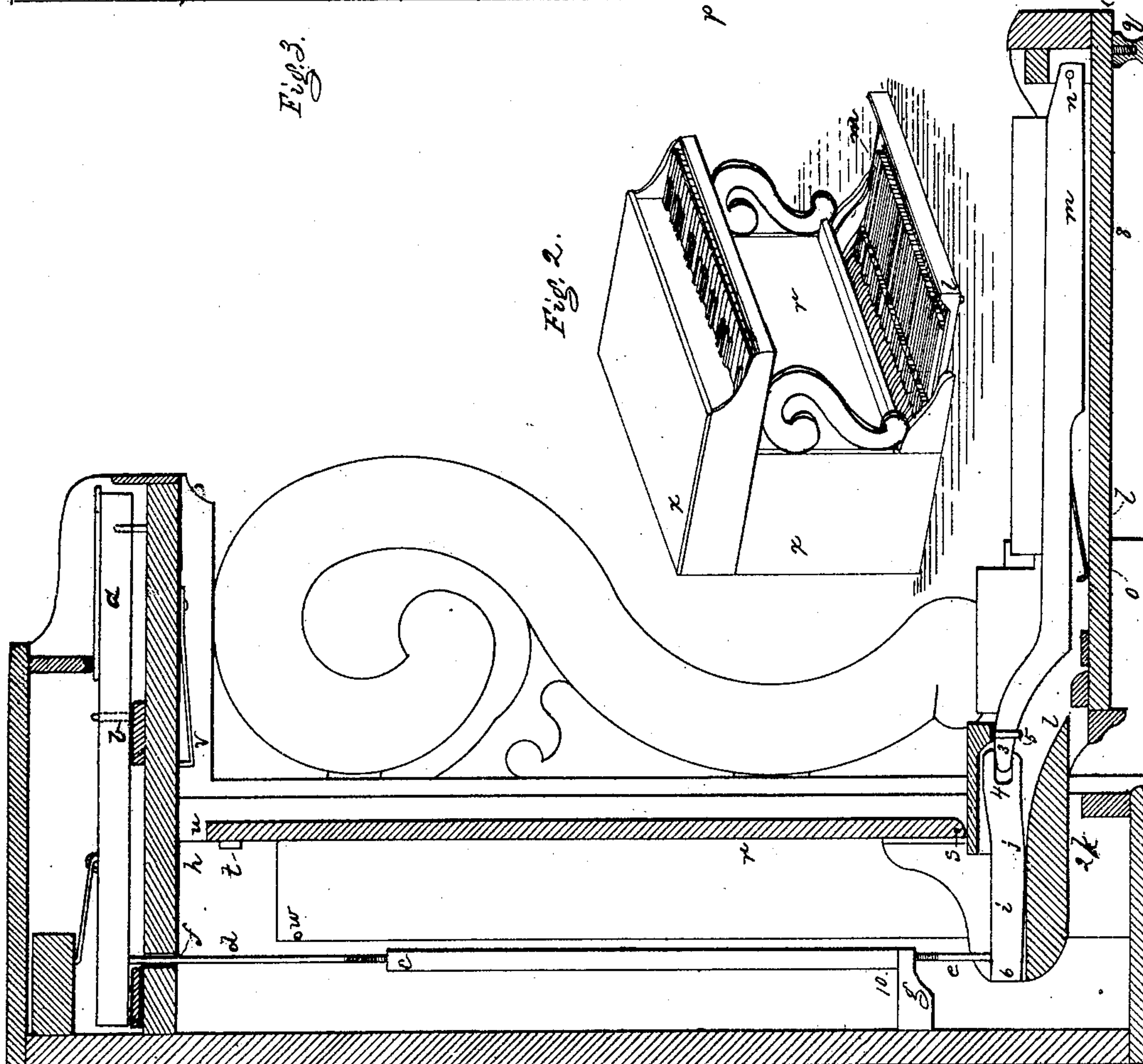


Fig. 2.

Witnesses.

L. H. Latimer.
 W. J. Pratt.

Fig. 1.

Inventor.

Walter H. Miller & Francis Fuller
 per County Attorney.

UNITED STATES PATENT OFFICE.

WALTER H. MILLER AND FRANCIS FULLER, OF BOSTON, MASSACHUSETTS,
ASSIGNORS TO HENRY F. MILLER, OF SAME PLACE.

IMPROVEMENT IN PEDAL-ACTIONS FOR PIANO-FORTES.

Specification forming part of Letters Patent No. **179,811**, dated July 11, 1876; application filed
June 3, 1876.

To all whom it may concern:

Be it known that we, WALTER H. MILLER and FRANCIS FULLER, both of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Pedal-Action for Pianos, of which the following is a specification:

This invention relates to a pedal-action attachment for pianos; and it is shown as applied to an upright piano.

The invention consists in a pivoted pedal key-board, adapted to serve as the front of the piano when closed, and to present the pedal-keys for action when open; also, in a pivoted pedal key-board, in combination with pedal keys and levers connected and movable therewith; also, in the combination, with the pivoted pedal key-board, of a secondary panel, movable with the pedal key-board and adapted to cover the interior mechanism or "action" when the pedal key-board is turned down.

Figure 1 shows the pedal key-board and part of an upright-case piano in section, the pedal key-board being turned down. Fig. 2 represents the exterior of an upright piano in perspective, the pedal key-board being down; and Fig. 3 represents the parts shown in Fig. 1, with the pedal key-board turned up.

In the drawing the piano-action is not shown, and it is understood that this action may be of any usual kind, and adapted to be connected with, and to be operated by, keys in any usual way. The ordinary piano-keys *a* are shown as pivoted at *b*, and their rear-most ends rest above the key-rods or lifters *c*, provided, in this instance, with extensible end pieces *d e*, the former adapted to extend through openings *f* in the board or bed *h*, and the latter, *e*, to extend through a guide-board, *g*, and rest on pedal-levers *i*, pivoted at *j* to the pedal key-board *k*, pivoted at or near its end 2 to the frame-work of the piano. The pedal-levers *m*, pivoted at *n*, are held up by suitable springs *o*, and, projecting through guides 5, their ends 3 enter slots 4 in the ends of the pedal-levers *i*. The wires or strings, sounding-boards, &c., for the upright piano are placed between the key-rods *c* and the back-board *p*.

In the position shown in Figs. 1 and 2 the pedal key-board *l* is turned down, its forward end resting on adjustable knobs *q*, that serve as feet to level the pedal key-board, and as knobs by which to handle it. In this position the player, by action of the feet on the pedal-keys *m*, will depress them and raise the end 6 of pedal-levers *i*, together with the key-rods *c*, and they will lift the back ends of the keys *a*, operating them in the same way that such keys would be operated if struck by the fingers when playing by hand on keys *a*; and these keys *a*, being suitably connected with any ordinary hammers, will strike the strings or wires. The lower end 2 of the pedal key-board and its front face 8 are finished to present the desired effect or appearance when the pedal key-board is elevated, as in Fig. 2. A secondary panel or front, *r*, is pivoted at *s*, by suitable ears, to move with the pedal key-board, and at top it is provided with a guide or button, *t*, to meet a shoulder or portion, *u*, of the frame and stop the upper end of the secondary panel, as indicated in Fig. 1, the secondary panel in such figure forming the front of the piano when the pedal key-board is down. When the pedal key-board is elevated, as shown in Fig. 3, it forms the front of the upright piano, and it is held in position by a suitable catch, *v*. The secondary panel, when the pedal action is elevated, moves to the position shown in Fig. 3, and its upper end is thrown against a stop or pin, *w*. As the pedal-keys and pedal-levers are both carried by the pedal key-board, they are always in proper position with relation to each other when the parts are placed as in Fig. 1, and the pedal-action is entirely out of the way and concealed when the pedal key-board is closed, as in Fig. 3. This construction of parts enables the production of a neat and compact pedal-action, and one entirely out of the way when it is desired to use the piano operating from the keys *a* alone, and, when closed up, the piano will resemble an ordinary piano.

We do not limit ourselves to the exact construction of devices herein shown, for the special levers and keys may be modified in shape without departing from our invention, and may be applied to upright or grand pianos.

The guide-board *g* serves as a stop for the key-rods when the pedal key-board is closed, the shoulders 10 on the rods resting on the guide-board. The case *x* of the piano may be of any proper size and configuration.

We claim—

1. The combination, with the frame of an upright piano, of a pivoted pedal key-board, adapted, when closed, to form the piano-front, and when opened, to serve as the support for, and to present the pedal-keys, substantially as described.

2. The pedal key-board, in combination with the pedal-keys and pedal-levers, all pivoted on, and movable with, the pedal key-board, substantially as described.

3. The pivoted pedal key-board and pedal-keys and pedal-levers, in combination with the secondary panel movable with the pedal key-board, substantially as described.

4. The pivoted pedal key-board, pedal-keys and pedal-levers, in combination with the lifters or key-rods *c* and keys *a*, substantially as described.

5. The pivoted pedal key-board and pedal-keys and pedal-levers, in combination with the shouldered key-rods and guide-board, all substantially as described.

6. The secondary panel, in combination with the pedal key-board, and with devices to control the position of the panel, substantially as described.

7. The combination, with the pivoted pedal key-board, of the adjustable knobs or feet, to place the pedal-levers and pedal key-board in proper position with relation to the key-rods or lifters, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WALTER H. MILLER.
FRANCIS FULLER.

Witnesses:

G. W. GREGORY,
S. B. KIDDER.