W. IBACH.

TRANSPOSING DEVICE FOR PIANOS.

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**1,068,137.** Patented July 22, 1913.

Fig. 1.

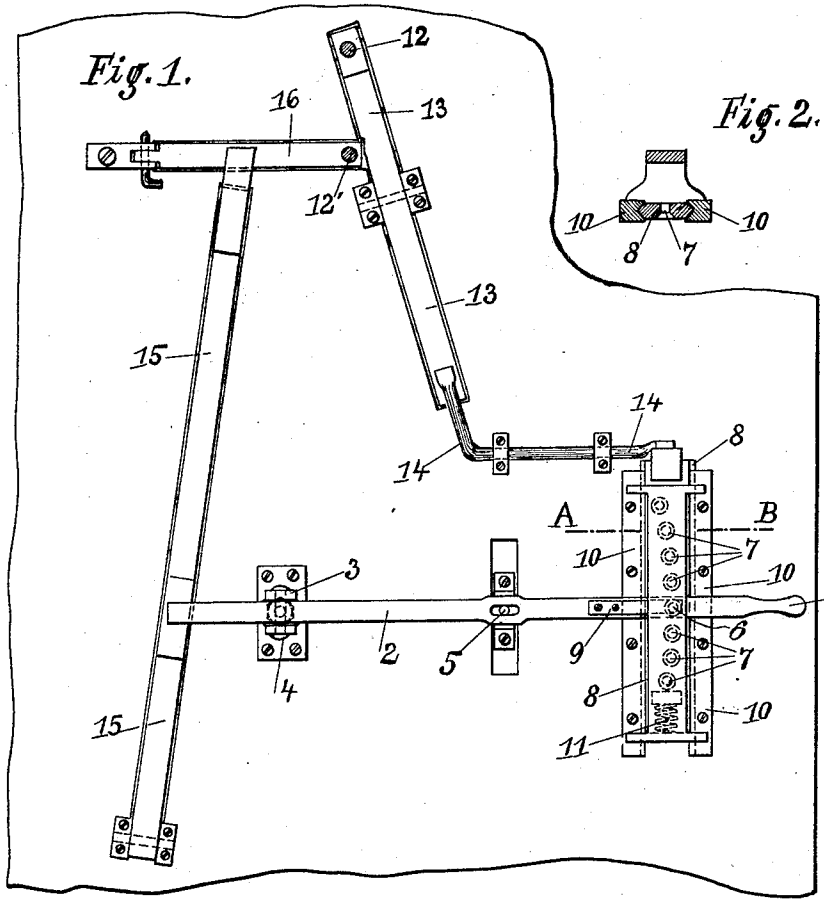
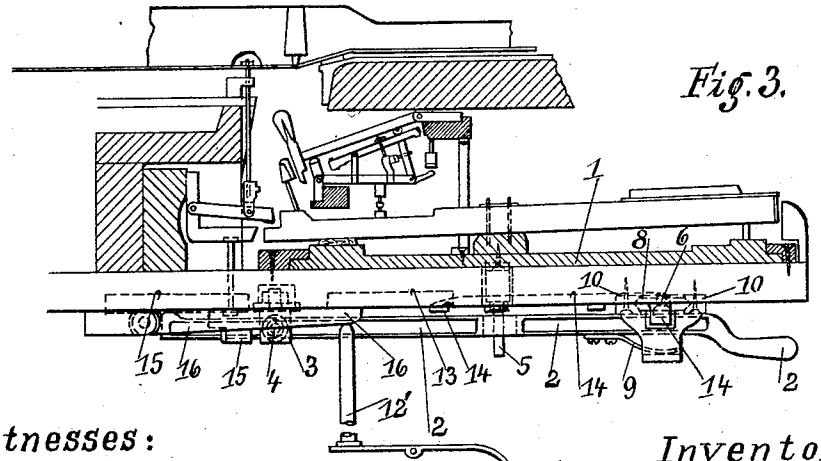



Fig. 2.




Fig. 3.




Witnesses:

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# UNITED STATES PATENT OFFICE.

WALTER IBACH, OF BARMEN, GERMANY.

## TRANSPOSING DEVICE FOR PIANOS.

1,068,137. Specification of Letters Patent. Patented July 22, 1913.

Application filed November 14, 1911. Serial No. 660,273.

*To all whom it may concern:*

Be it known that I, WALTER IBACH, a subject of the King of Prussia, residing at Barmen, in the Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Transposing Devices for Pianos, of which the following is a specification.

This invention relates to a transposing device for pianos and more particularly for grand pianos, in which the frame with the key-board and its action can be displaced by means of a convenient device.

The improvement consists in the arrangement according to which the key-board and the action can be shifted for pianissimo effect by means of a pedal after the transposing device is adjusted by means of a hand lever or crank and further in the arrangement according to which the damping device is lifted when the transposing device is being operated.

In the accompanying drawings the device is shown by way of example.

Figure 1 is a bottom view of the bottom plate of the instrument and represents the action for the key-frame. Fig. 2 is a section on a larger scale on line A—B (Fig. 1). Fig. 3 is a cross section of the piano.

The key-board and its action are mounted upon the movable key-frame 1 so that their position can be altered with regard to the strings of the piano. A hand lever 2 mounted under the bottom plate of the piano serves for displacing the key-frame 1. This lever 2 is mounted on a horizontal pivot in bracket 3 which is attached by a vertical pivot to the bottom board. This lever 2 acts upon the key-frame 1 through the intermediary of a pin 5 fixed to the key-frame and adapted to slide in a slot of said lever. The hand-lever 2 is secured in its position by means of a pin 6 which is pressed, through the action of a spring 9, into one of the notches 7 of a plate 8.

In order to make the key-frame movable by a pedal after it has been displaced by the hand lever for transposing, the plate 8, which has the notches for the pin 6 of the spring-influenced hand-lever 2, is constructed so as to act as a slide and it is guided between guide rails 10. This plate 8 is maintained in its position by means of a spring 11 so that it offers sufficient support for fixing the transposing device in position. The movement of one of the pedal rods 12 is transferred to this slidable plate 8 by means of levers 13 and 14, in such a manner that, when the said pedal is depressed, the plate 8 is displaced against the action of the spring 11. The plate 8 draws along the hand-lever 2 which is connected with the same by means of the pin 6 for such a distance that this hand-lever displaces in its turn the key-frame so much that the hammers strike only a part of the corresponding strings when the corresponding keys are depressed.

For disconnecting the dampers from the key-board during the transposing, said dampers are lifted by means of the hand-lever 2 when the key frame is being displaced. With this object in view, the rear end of the hand-lever acts upon a separate lever 15 which in its turn acts upon a lever 16 operated by the "forte" pedal through rod 12′ and serves for lifting the dampers.

The mechanisms for transposing as hereinbefore described and shown in the drawings, as well as the mechanisms for the displacement of the transposing device by a pedal, have been given by way of example only, and they could be replaced with the same result by an equivalent similarly acting device.

I claim:—

1. A grand piano, comprising in combination with the movable key-board and its movable action, a frame carrying the keys, a hand lever for shifting the key-frame for transposing, a pianissimo pedal and means connecting the pedal with said hand-lever so that the key-frame can be further shifted slightly by the pedal after it has been displaced for transposing, substantially as described.

2. A grand piano, comprising in combination with the key-board and its movable action, a movable frame carrying said key-board and action, a hand-lever pivotally mounted under the bottom plate of the piano, a rod connecting said hand-lever witht the movable key-frame, a pin projecting from said connecting rod, a spring acting upon said pin a movable plate having holes for the reception of the pin of the spring influenced connecting rod, guide rails in which said movable plate is guided, the pianissimo pedal of the piano and means for connecting said pedal with

said slidable plate so that the same, with the hand-lever, is moved when the pedal is depressed.

3. A transposing device for grand pianos, comprising in combination with the movable key-board and its movable action, a movable frame carrying said key-board and action, a hand-lever pivotally mounted under the bottom plate of the grand piano, means for connecting said hand-lever and said movable key-frame, the dampers of the piano, a lever hingedly connected with said dampers, said hand-lever having its rear end extended and bearing upon said damper-lever whereby the dampers may be lifted before the frame is shifted, substantially as described and shown and for the purpose set forth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

WALTER IBACH. [L. S.]

Witnesses:
HELEN NUFER,
ALBERT NUFER.

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