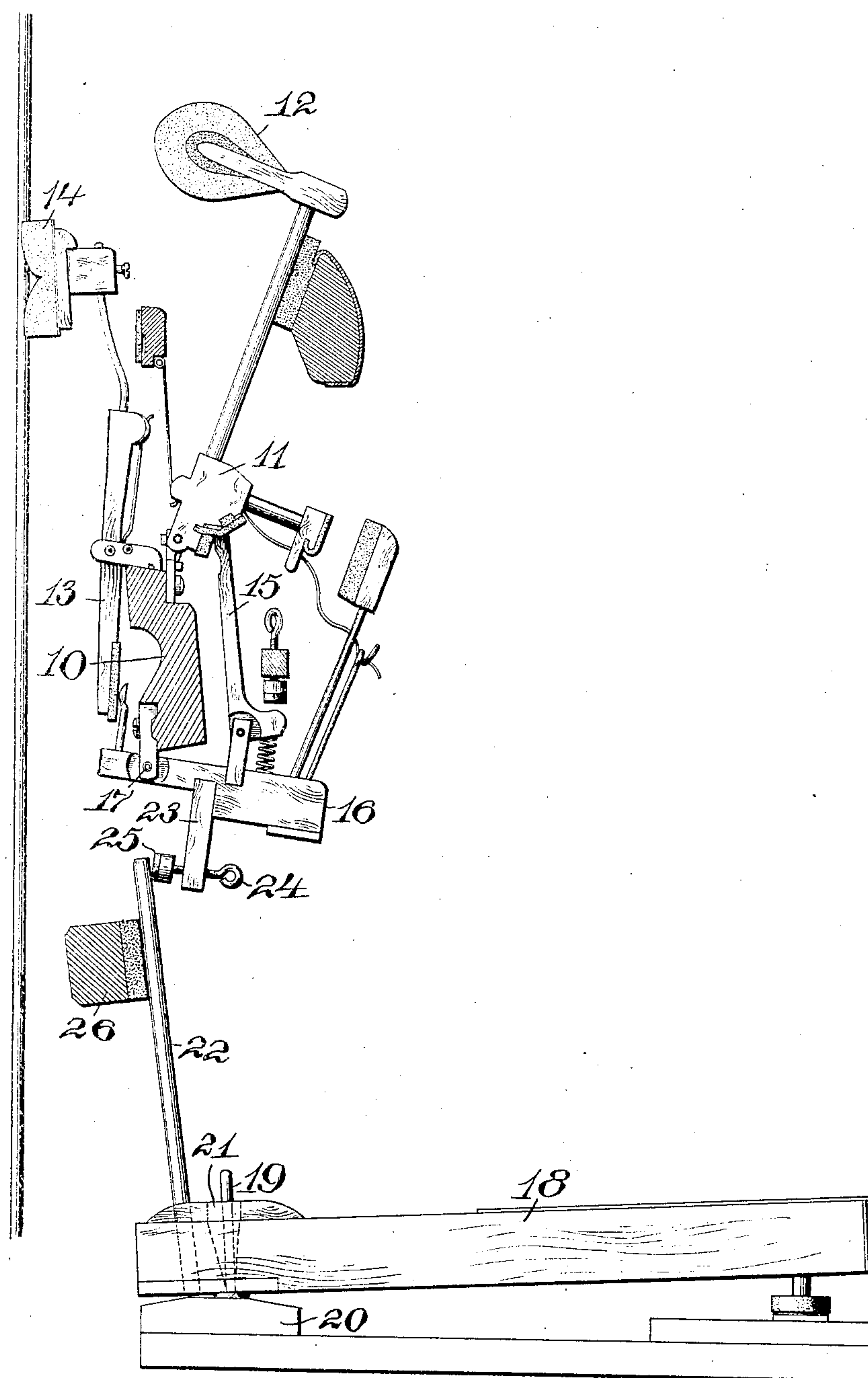


R. LOHR & C. BERGLUND.  
PIANO ACTION.  
APPLICATION FILED SEPT. 14, 1908.

912,008.

Patented Feb. 9, 1909.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

ROBERT LOHR, OF NUTLEY, AND CARL BERGLUND, OF EAST ORANGE, NEW JERSEY.

## PIANO-ACTION.

No. 912,008.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed September 14, 1908. Serial No. 452,841.

*To all whom it may concern:*

Be it known that we, ROBERT LOHR and CARL BERGLUND, citizens of the United States, residing at Nutley and East Orange, respectively, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Piano-Actions; and we do hereby 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 figures of reference marked thereon, which form a part of this specification.

This invention is designed to provide a piano action that will enable a piano to be built much narrower than formerly, and furnish an instrument that is adapted for narrow spaces and more particularly for situations where there is little room for a piano, as in a flat, or where only a small room is available. This is brought about by using any usual hammer action, but supplying a short key whereby the key-board is brought nearer the strings.

In the usual form of piano the keys are fulcrumed approximately near their centers in order to get the leverage to make a light touch on the finger end of the key. In the improved action we do not diminish the leverage from the finger end of the key to the fulcrum, but we end the key just beyond the fulcrum and operate the wippen of the action from the short end of the key by an extension arranged at an angle to the key and exerting a pressure on the wippen so that it will swing on its pivot to operate the action.

Another object of the invention is to provide an adjusting screw between the key extension and the wippen, which places the adjustment in an accessible position.

The invention is illustrated in the accompanying drawing, which illustrates a piano action made after our improved design.

The action itself is of any usual form employing the action rail 10 to which is secured the hammer butt 11 with its hammer 12, and also supporting the damper lever 13 having on its end the damper 14. The hammer is operated by the jack 15 which is mounted on the wippen 16 in the usual manner. The wippen is pivotally suspended on the action rail on the pin 17 and has the usual motion to operate the action. We however, instead of operating the wippen with a vertical pressure,

give it an approximately horizontal pressure which however causes it to swing on its pivot. This is brought about by making the key 18 with its finger end as usual, but the key is shorter than the usual form and is pivoted on the pin 19 on the balance rail 20, the pin passing through the slot 21. This slot is near the inner end of the key and gives the leverage to make a light touch, but the motion is compensated for by an extension 22 usually in the shape of a rod angularly arranged on the key adjacent to its pivot.

The extension can be arranged at any angle best adapted to suit the style of piano and to give the best results. The end of the extension engages the wippen to operate it, the preferred way being to form a finger 23 on the wippen and this can, if desired, have an adjusting screw 24 therein, the screw having a washer 25 of felt or similar material to engage the extension 22. The stop rail 26 receives the key extension 22 and limits the return motion of the key, as will be evident.

This key action and its connection to the whole piano action can be adapted to any make of piano, and the particular way and places of connecting the parts can be altered without departing from the scope of our invention.

Having thus described our invention, what we claim is:—

1. A piano action comprising a wippen, a key pivoted near its inner end, and an angular extension on the key adjacent to its pivot with its ends engaging the wippen and acting to swing the wippen when the key is manually manipulated.

2. A piano action comprising a wippen, a key pivoted near one end, an extension projecting from the key adjacent to its pivot and at an angle thereto, and a finger on the wippen adapted to be engaged by the extension whereby the finger is subjected to a substantially horizontal pressure to swing the wippen when the key is operated.

3. A piano action comprising a wippen, a key pivoted near one end, an extension projecting from the key adjacent to its pivot and at an angle thereto, a finger depending from the wippen and adapted to be engaged by the extension whereby the finger is subjected to a substantially horizontal pressure to swing the wippen when the key is operated, and an adjusting means between the extension and the finger.

4. A piano action comprising a wippen, a



key pivoted near one end, an extension angularly projecting from the key, and means for adjustment connecting the extension and the wippen.

5 5. A piano action comprising a wippen, a key pivoted near one end, an extension angularly projecting from the key, a finger on the wippen, and a regulating screw in the finger and engaging the extension.

10 6. A piano action comprising a pivoted wippen, a key pivoted near one end, an extension projecting from the key at an angle

thereto, a finger on the wippen, a regulating screw in the finger and adapted to be engaged by the extension of the key, and a rail 15 to limit the return movement of the key.

In testimony, that we claim the foregoing, we have hereunto set our hands this 12th day of September 1908.

ROBERT LOHR.  
CARL BERGLUND.

Witnesses:

E. A. PELL,  
WM. H. CAMFIELD.

Correction in Letters Patent No. 912,008.

It is hereby certified that in Letters Patent No. 912,008, granted February 9, 1909, upon the application of Robert Lohr, of Nutley, and Carl Berglund, of East Orange, New Jersey, for an improvement in "Piano-Actions," an error appears in the printed specification requiring correction, as follows: In line 91, page 1, the word "ends" should read *end*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 16th day of March, A. D., 1909.

[SEAL.]

C. C. BILLINGS,  
*Acting Commissioner of Patents.*