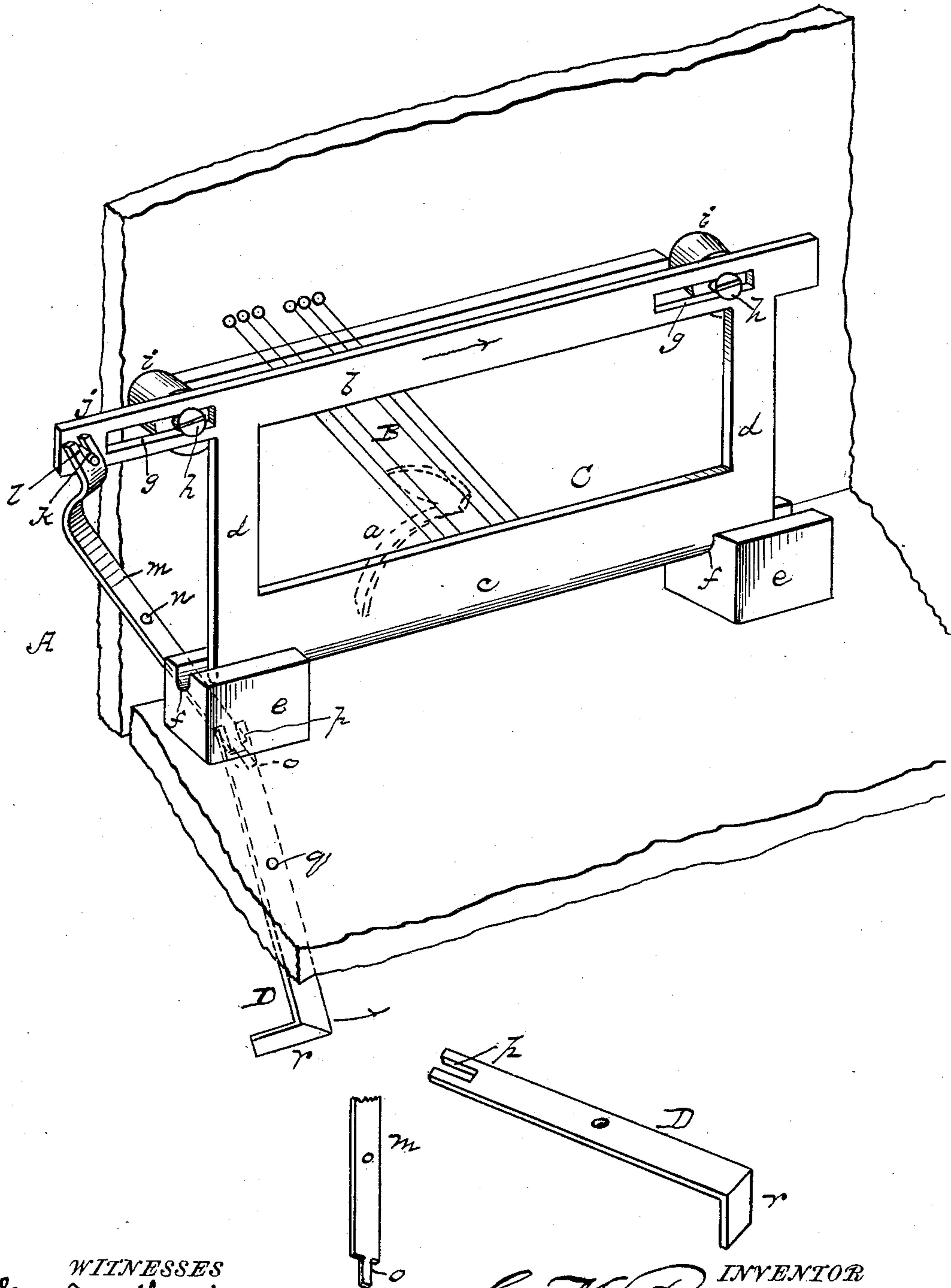


(No Model.)

C. M. RICHARDS.
SHIFTING PIANO ACTION.

No. 407,035.

Patented July 16, 1889.



WITNESSES

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Jm. A. Heck.
Frank Steele,

INVENTOR

INVENTOR
C. M. Richards
By E. H. Bates
Attorney

UNITED STATES PATENT OFFICE.

CHARLES M. RICHARDS, OF FORT SCOTT, KANSAS.

SHIFTING PIANO-ACTION.

SPECIFICATION forming part of Letters Patent No. 407,035, dated July 16, 1889.

Application filed January 7, 1889. Serial No. 295,614. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. RICHARDS, a citizen of the United States, residing at Fort Scott, in the county of Bourbon and State of Kansas, have invented certain new and useful Improvements in Shifting Piano-Actions; and I 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.

This invention has relation to improvements in devices for shifting action of pianos; and it consists in the novel construction and arrangement of the same, whereby the action can be shifted to the right hand just sufficiently to bring the hammers exactly opposite the next or adjacent strings or unisons, for the purpose of raising the pitch of tone one-half step, all as will be hereinafter fully explained.

Referring by letter to the accompanying drawing, which represents a perspective view of my device, A designates a portion of the casing of a piano, and B the portion of the strings which is deemed sufficient to illustrate my device in connection therewith.

C indicates the action-frame carrying the hammers *a*. This frame consists of an upper horizontal bar *b*, a lower horizontal bar *c*, and end bars *d d*, which connect the two horizontal bars aforesaid to one another. This frame has a lateral sliding movement in blocks *e e*, which are grooved at *f* in their upper surfaces, and in which rests the lower sliding bar of the frame. The upper bar of this frame is provided at each end with horizontal slots *g g*, through which pass screws or headed fastening-pins *h h*, that enter blocks *i i* on the piano-casing. The end *j* of the upper horizontal bar is provided with a stud or pin *k*, which engages the fork *l* in the upper end of the bent

lever *m*, which latter is pivoted about its center, as at *n*, to the casing. The lower end of this bent lever is provided with a shouldered projecting point *o*, which engages the forked end *p* of a thumb-lever D. This lever D is pivoted about its center, as at *q*, to a part of the casing, and the thumb-piece *r* thereof projects beyond said casing in easy reach of the operator.

It will be seen from the above description and by reference to the annexed drawing that the action-frame can be shifted readily by the operator, who simply draws the thumb-piece to the right-hand side, when its bar turns on its pivot, thus causing the lever *m* to simultaneously turn on its pivot and by its forked end engaging the pin on the upper bar of the frame cause said frame to shift to the right-hand side and carry with it the hammers. By thus shifting the actions the hammers are moved from one set of unisons to another to change the pitch, the effect of which is a transposition of the scale.

Having thus described my invention, what I desire to claim and secure by Letters Patent is—

The within-described shifting device for pianos and the like, consisting of the sliding frame provided with guideways or grooved blocks *e e*, the upper horizontal bar having guides or slots *g g* and provided with the pin *k*, the bent forked lever *m*, pivoted at *n*, and the thumb-lever connected to said bent lever and pivoted at *q* to the casing, the whole adapted to operate substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES M. RICHARDS.

Witnesses:

MICHAEL A. BROWN,
EBEN. J. DAUGHTERS.