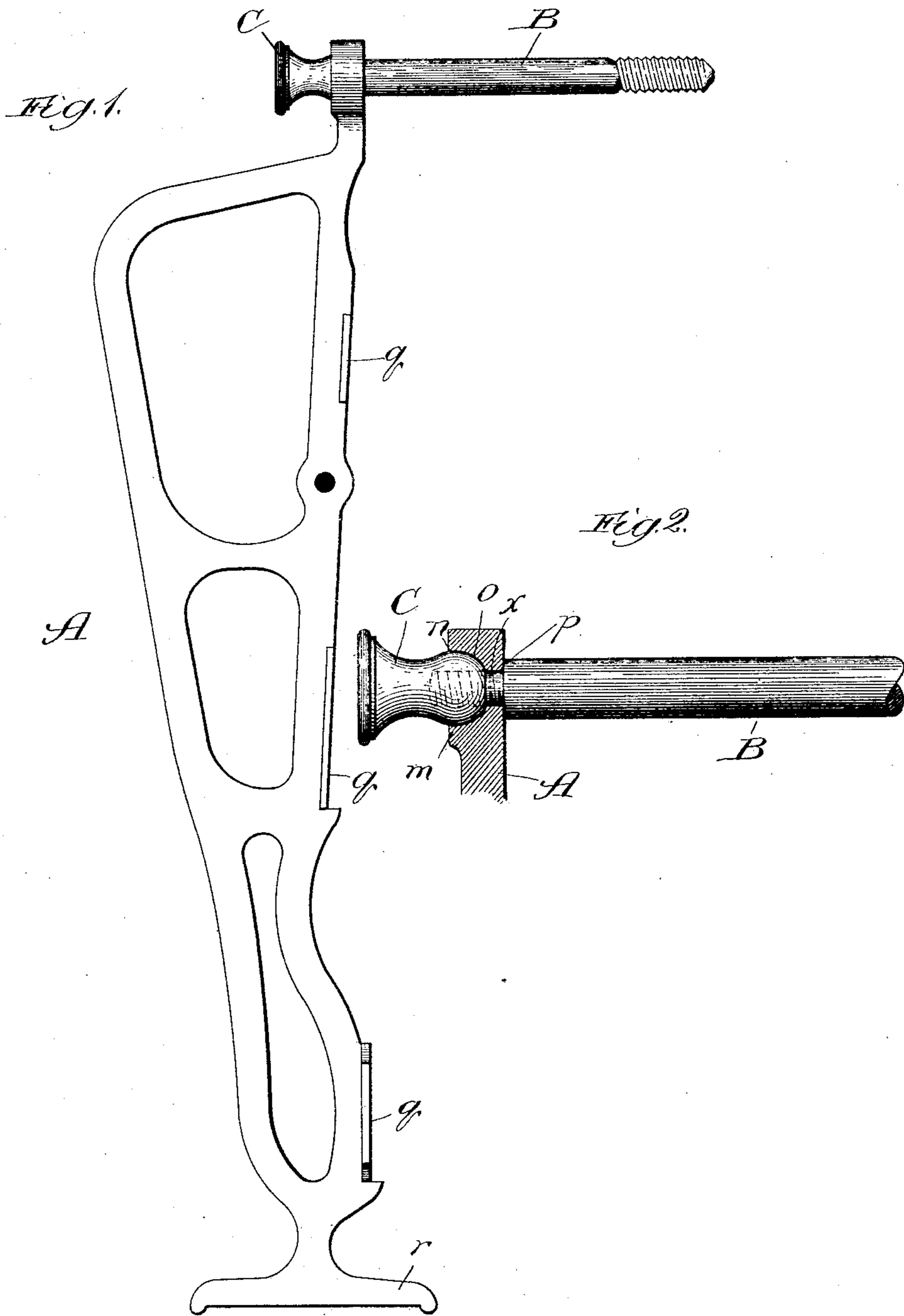


(No Model.)

W. M. BAUER.  
ACTION SUPPORT FOR UPRIGHT PIANOS.

No. 454,576.

Patented June 23, 1891.



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# UNITED STATES PATENT OFFICE.

WILLIAM M. BAUER, OF CHICAGO, ILLINOIS.

## ACTION-SUPPORT FOR UPRIGHT PIANOS.

SPECIFICATION forming part of Letters Patent No. 454,576, dated June 23, 1891.

Application filed February 12, 1891. Serial No. 381,131. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM M. BAUER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Action-Supports for Upright Pianos, of which the following is a specification.

In an upright piano it is customary to support the action through the media of upright brackets, two of which are commonly provided near opposite ends of the action and two intermediate ones at opposite sides of the vertical center of the action, the brackets being fastened at intervals to the action-racks, and the two end ones resting at their lower ends on action-props. To support the brackets (and by their means the action) it has hitherto been customary to suspend them on bolts fastened at their rear ends in the maple-block pin-board to project horizontally forward, and the means employed for fastening the brackets at their upper ends, where they are provided with eyes or are forked to surround the supporting-bolts, comprise ordinary nuts screwed upon the forward threaded ends of the bolts against the forward sides of the upper ends of the brackets, thereby clamping the latter between the nuts and shoulders on the bolts behind their threaded ends.

My improvement relates to the means for fastening the brackets to the aforesaid supporting-bolts. Where the brackets are fastened by clamping them in the manner stated the vibrations in the instrument tend to loosen them, thereby entailing rattling in the use of the instrument, and when loosened they will sink with the key-board if the latter sinks, which is objectionable, inasmuch as it enables the repairer or tuner to hammer down the protruding portions of the bracket-supporting bolts where the aforesaid forked brackets are employed, and thereby adapt the bolts to the sunken situations of the key-board and action, instead of enforcing him to jack up the key-board to right it.

The object of my improvement is to provide means which will tend effectually and permanently to tighten the action-brackets in place against the usual causes of their loosening, and which will, furthermore, in case

of the key-board sinking, preclude the possibility of meeting between its action-props and the brackets without properly jacking up the key-board.

To this end my invention consists in the peculiar construction of the bracket-fastening nut, whereby it is adapted to enter the bracket socket or opening in engaging the supporting-bolt and become tightly wedged in place in its application to fasten the bracket.

In the accompanying drawings, Figure 1 is a view in side elevation of a piano-action bracket provided with my improved fastening means. Fig. 2 is a broken view showing the upper or socket end of the bracket in section with my improvement applied, the parts being shown in actual operative size.

A is a bracket for the action of an upright piano. It is of the usual or any suitable general shape, and if employed as an end bracket should be provided at its lower extremity with a rest *r* to seat on an action-prop. At intervals on its rear edge are the flanges *q*, at which to fasten it to the action-racks.

B is the bolt referred to as commonly provided to protrude horizontally forward from the maple-wood pin-block, and which is threaded, as shown at *x*, at its forward end from a shoulder *p*.

C is my improved nut, having an internally-threaded socket to admit the threaded end of the bolt B and tapering externally toward its extremity, as shown at *o*, from a circumferential bulge *n*. The tapered and bulging end of the nut C enters the socket or opening *m* provided in the upper end of the bracket, which should conform or approximately conform to the shape of the portion of the nut which enters it and be reduced toward its rear side to afford an opening merely large enough to admit the threaded end of the bolt, whereby the shoulder *p* on the latter will overlap it and bear against the rear side of the socket portion of the bracket.

As will be seen by the use of the described form of nut C, it will, by its adjustment, become wedged in the socket *m*, and thus be secured against loosening by vibration or other usual cause of such loosening and will firmly clamp the bracket on the bolt. Furthermore, by entering the bracket-opening to

perform its fastening function it necessarily centers the said opening in relation to the pin, so that in case the key-board of the piano should sink, as frequently occurs, it must be  
5 jacked up to meet the rest *r*, it being impossible to effect such meeting by (to that end) hammering or bending down the bolt *B*, since thereby its threaded end would be caused to protrude obliquely through the bracket-socket  
10 *m* and preclude the proper adjustment upon it of the nut.

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a piano-action  
15 bracket *A* and its supporting-bolt *B*, a nut *C*, having a threaded opening to fit the threaded end of the bolt and a bulging exterior tapering toward its extremity to enter the bracket-opening and wedge itself therein in fastening

the bracket on the bolt, substantially as described. 20

2. In combination with a piano-action bracket *A* and its supporting-bolt *B*, a socket  
25 *o* in the upper end of the bracket, reduced toward its rear end to the size for admitting the threaded end of the bolt and affording a bearing for the bolt-shoulder *p*, and a nut *C*, having a threaded opening to fit the threaded  
30 end of the bolt and a bulging exterior tapering toward its extremity to enter the bracket-socket and conforming or approximately conforming thereto, substantially as and for the purpose set forth.

WILLIAM M. BAUER.

In presence of—

J. W. DYRENFORTH,  
M. J. FROST.