

No. 872,498.

PATENTED DEC. 3, 1907.

A. W. CLEVELAND.
PIANO BENCH.
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Fig. 1.

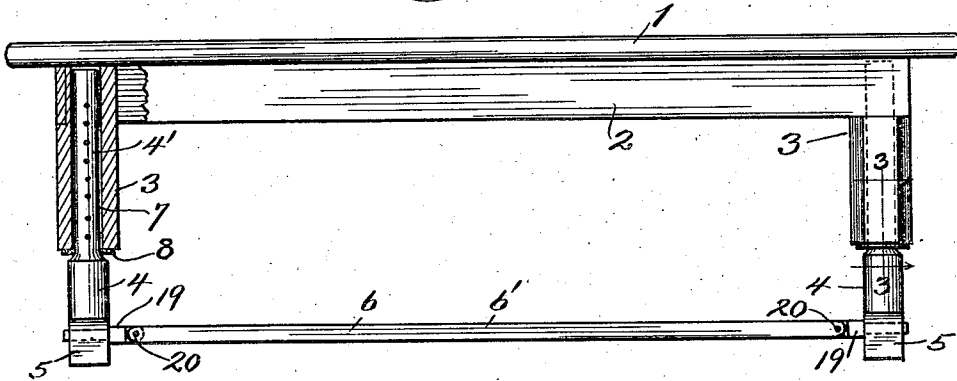


Fig. 2.

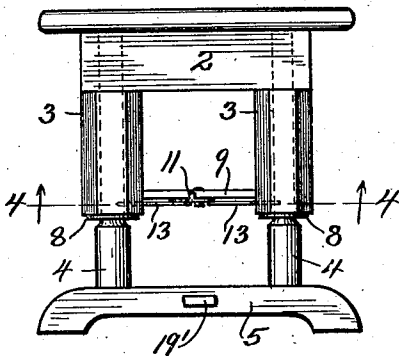


Fig. 3.

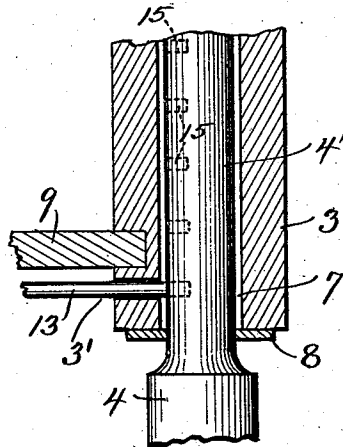
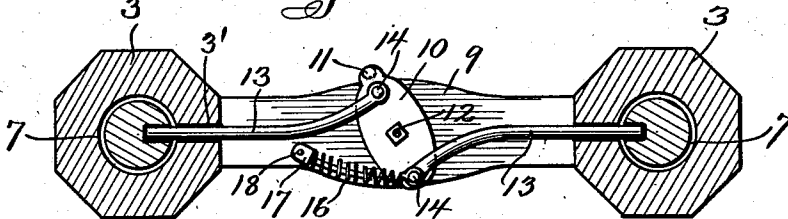


Fig. 4.



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UNITED STATES PATENT OFFICE.

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PIANO-BENCH.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALVA W. CLEVELAND, a citizen of the United States, residing at Waukesha, in the county of Waukesha and State of Wisconsin, have invented certain new and useful Improvements in Piano-Benches, of which the following is a specification.

This invention relates to piano or organ benches, and has for its salient objects to provide such a bench which may be adjusted as to height by raising or lowering its ends separately and without bending of any of the parts; to provide a bench characterized as aforesaid and which is devoid of the complicated mechanism usually built into benches of this general type for causing both ends thereof to rise or drop simultaneously and equally; and in general to provide a bench of simplified and improved construction, and of neat and ornamental appearance.

The invention consists in the matters hereinafter described and more particularly pointed out in the appended claims.

The invention will be readily understood from the following description, reference being had to the accompanying drawing, in which—

Figure 1, is a side elevation of the stool with parts broken away to show telescopic arrangement of the leg members; Fig. 2 is an elevation of the device; Fig. 3 is an enlarged detail view taken through line 3—3 of Fig. 1 and looking in the direction of the arrows. Fig. 4 is a sectional view taken through line 4—4 of Fig. 2 and looking in the direction of the arrows.

Described generally, the bench herein shown comprises the seat-board 1, the usual trimmers 2, four socketed leg-posts 3, corresponding legs proper 4, the two base pieces 5, connecting the lower ends of the two pairs of legs 4, and a longitudinal brace 6 connecting the two base-pieces 5.

The leg-posts 3 are strongly secured within the angles formed by the meeting trimmers 2, and extend downwardly a distance equal to about one-half the normal height of the bench. Each one thereof is provided with a longitudinal bore 7 for the reception of the cylindric upper portion 4' of the corresponding leg 4. The sliding fit between these parts is made somewhat loose whereby either end of the bench may readily be

raised or lowered relatively to the base portion, comprising the legs 4 and members 5.

To prevent apparent looseness and rattling of the upper parts of the legs within their sockets, I provide each socket piece 3 upon its lower end with a thick washer 8 made of felt or the like material, the circular opening in which is dimensioned to fit closely around the leg portion 4'. The washers are secured to the parts 3 in any preferred manner.

The members of each pair of leg-sockets 3 are rigidly connected by a cross-piece 9. The bench proper is supported adjustably upon the leg portion 4' by means of bolt-work mounted on the two cross-pieces 9. Preferably this bolt-work is constructed as follows: a lever 10 having a thumb-piece or handle 11 is pivoted at 12, centrally upon the cross-piece 9. The two bolts 13 are connected to said lever as at 14, oppositely set from the fulcrum 12. Facing the companion leg, each leg portion 4' is provided with a vertical series of bolt-sockets 15 (Fig. 3). The end portions of the bolts 13 pass loosely through holes 3' in the leg sockets 3 and into certain of the bolt-sockets 15. The bolts are held yieldingly in locked position by a spring 16 acting upon the bolt lever. Preferably I employ an expansion-spring, which is conveniently held by a curved metal arm 17, attached to the cross-piece at 18. The center of the arc of curvature of the spring-holder 17 is not necessarily coincident with the fulcrum of the lever 10.

A very important feature is the construction and arrangement of the longitudinal brace 6 which connects the two base-pieces 5 at the ends of the bench. It will be readily understood that were an integral, rigid brace rigidly secured at both its ends to said base-pieces, the lifting or lowering of either end of the bench alone would cause all four of the legs to bind within their sockets, provided, of course, that the bolts 13 are disengaged at the time. That is to say, the lower leg-structure of the bench would remain relatively rigid, and the leg-posts would bind thereon, thereby rendering the adjustment difficult, and dangerous to the structure.

My improved construction consists in articulating the brace 6 in such manner that it will yield to the tilting movements of the legs that occur when either end of the bench is lifted independently of the other. The

brace is made in three sections, the two end sections 19 and the long intermediate section 6'; the sections being connected pivotally by horizontally-disposed pins 20. The end sections 19 are tenoned tightly into mortises in the base pieces 5, as indicated at 19'. When, now, either end alone of the bench-seat 1 is lifted or lowered (the bolts 13 being held disengaged by means of the lever handle 11), the pivots 20 will permit the necessary slight swinging movements that will be imparted to the legs, the base-pieces and the tenon sections 19, thus permitting the leg posts to slide freely upon the legs until the desired adjustment is reached. The bolts being released and engaging the legs at this end of the bench, the operator passes to the other end, frees the bolts thereof, raises or lowers the end of the bench to the level of the other end, and releases the bolts.

The details of construction may be varied somewhat without departing from the spirit of the invention.

I claim as my invention:

1. In a bench, the top frame comprising two leg-receiving members at each end thereof, and a bottom frame comprising two transverse base-pieces, legs rising from said base-pieces, and a longitudinal brace connecting said base-pieces, said brace being so articulated as to permit angular movement of the base-pieces and legs relatively thereto.

2. In a bench, the top frame comprising two leg-receiving members at each end thereof, a bottom frame comprising the legs, the basepieces, and a longitudinal brace, the legs having telescopic engagement with the leg-receiving members, said longitudinal brace having jointed connections with the two end

sections, and locking mechanism for adjustably locking the bottom leg frame to said leg-receiving members.

3. In a bench, the top frame comprising the leg-receiving members, and the bottom frame comprising the transverse base-pieces, the legs rising therefrom, and a longitudinal brace connecting said base-pieces, said brace consisting of two terminal members rigidly secured to said base-pieces, respectively, an intermediate member the ends of which are pivoted to said terminal members in such a manner as to permit oscillation of either of the end members in a vertical plane, and locking mechanism for adjustably locking the bottom leg frame to said leg-receiving members.

4. In a bench, the top frame comprising two pairs of leg-receiving members, a transverse member connecting each pair of said leg-receiving members, a lever pivotally mounted upon said transverse member, a pair of spring actuated locking bolts rotatably secured to opposite sides of said lever, a coil spring secured in one end to said lever and at the other end to said transverse member and tending to force said bolts into contact normal locking position, a bottom frame comprising two transverse base-pieces, two pairs of legs rising therefrom and having loose, telescopic engagement with the leg-receiving members, each leg being provided with a series of bolt-holes arranged to receive the ends of the locking bolts.

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Witnesses:

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