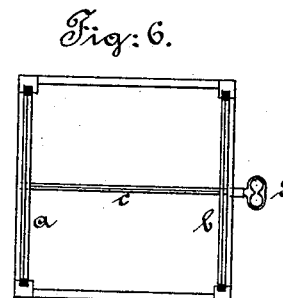
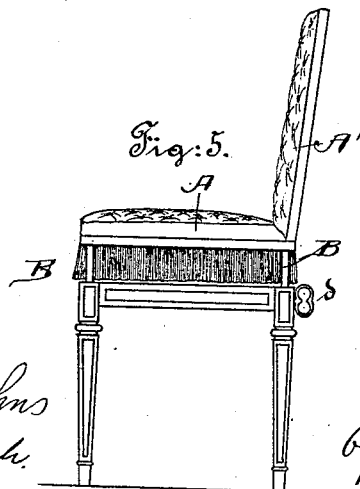
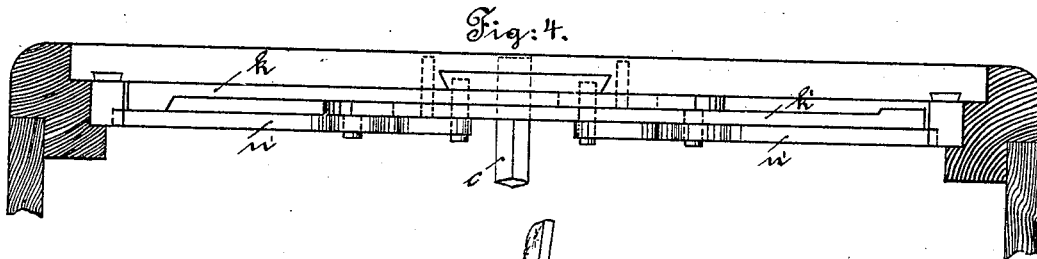
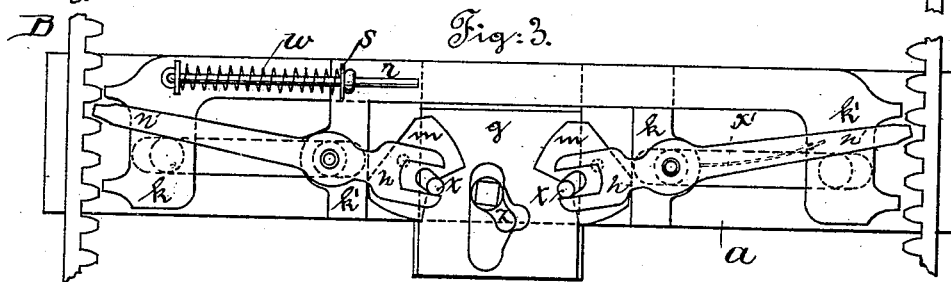
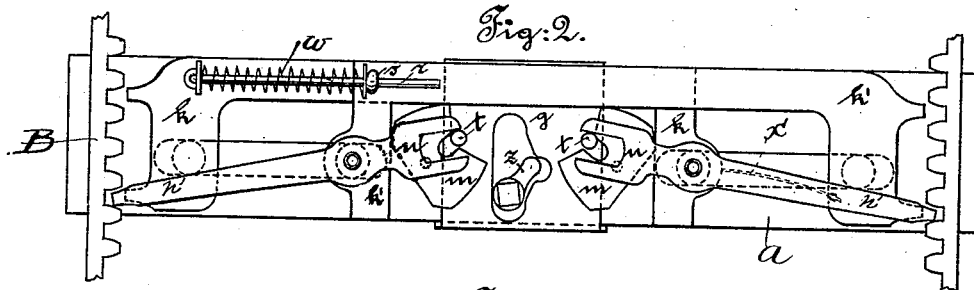
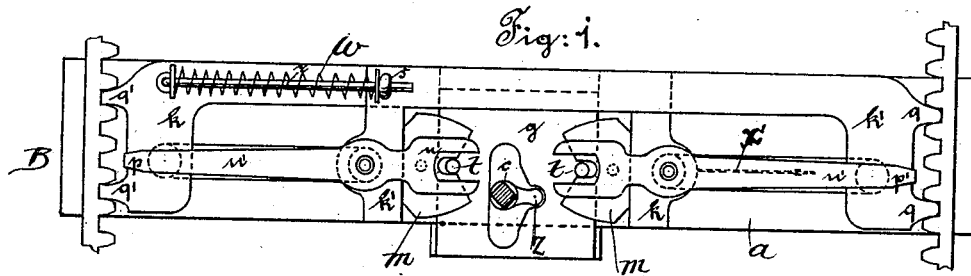


E. CALIX.  
MUSIC STOOL.

No. 267,325.

Patented Nov. 14, 1882.



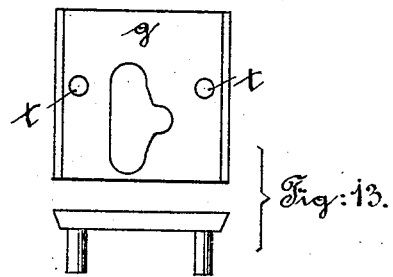
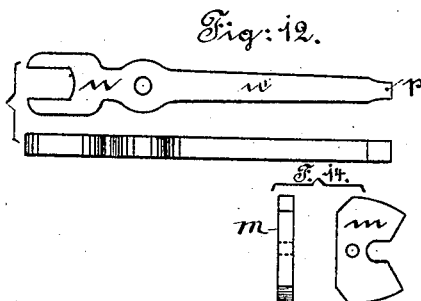
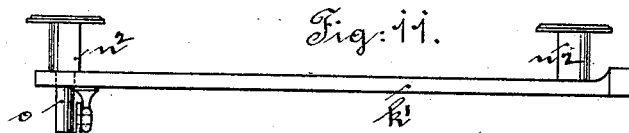
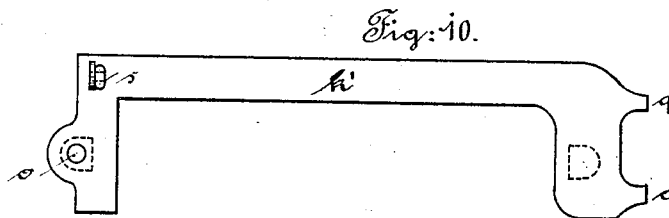
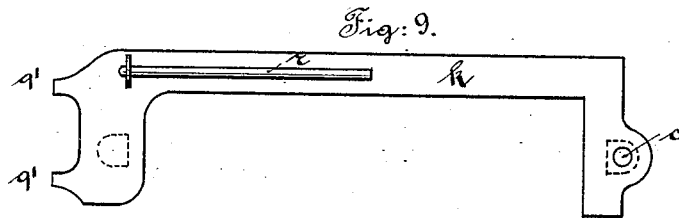
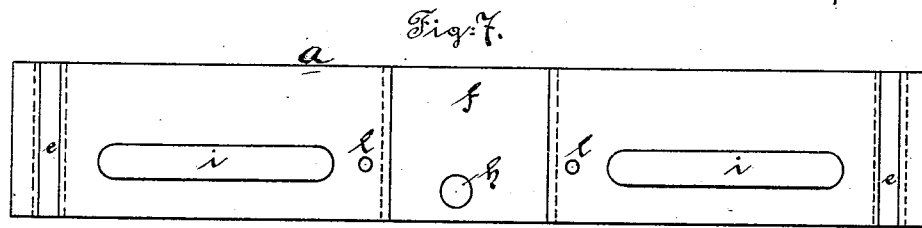
Witnesses:  
Francis Johns  
Fred F. Church.

Inventor:  
Edouard Calix.  
by McMillan Church  
His Att.

E. CALIX.  
MUSIC STOOL.

No. 267,325.

Patented Nov. 14, 1882.



Witnesses;  
Frank W. Johns  
Melville Church

Inventor;  
Edouard Calix  
by Melville Church  
His atty.

# UNITED STATES PATENT OFFICE.

EDOUARD CALIX, OF ZURICH, SWITZERLAND.

## MUSIC-STOOL.

SPECIFICATION forming part of Letters Patent No. 267,325, dated November 14, 1882.

Application filed June 6, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, EDOUARD CALIX, of Zurich, Switzerland, have invented certain new and useful Improvements in Music-Stools; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figures 1, 2, and 3 show in elevation the mechanism for raising and lowering the seat-frame in different positions. Fig. 4 is a top plan of the same with the spring removed. Fig. 5 is an elevation of a complete music-stool constructed in accordance with my invention. Fig. 6 is a plan view of the seat-frame with the top removed. Figs. 7 to 13 are views in detail of the various parts of the raising and lowering mechanism.

Similar letters of reference in the several figures denote the same parts.

Music-stools as ordinarily constructed consist of a round top or seat proper, having no back, mounted centrally upon a spindle which is supported in a suitable base or socket, said spindle and socket being correspondingly screw-threaded to permit the adjustment up and down of the spindle and the seat carried thereby; but this form of stool is objectionable, because after long use the spindle and socket become worn, causing an oscillation and unsteadiness of the seat when raised to any extent.

My present invention has for its object to provide a music-stool having a back, and which shall at all times be evenly and firmly supported in any position to which it may be adjusted; and to this end it consists of a stool constructed and operated substantially as I will now proceed to describe, and point out particularly in the claims at the end of this specification.

Referring to the drawings, the seat-frame, as shown in Figs. 5 and 6, is constructed of rectangular form, supported by legs at its four corners, and provided with a rectangular adjustable top or seat proper, A, suitably upholstered and provided with a back, as shown at A'.

Secured to the front and rear bars respectively of the seat-frame are similarly-formed metal plates *a b*, as shown in Fig. 6, each being constructed, as shown in Figs. 7 and 8, with dovetail grooves *e* near the ends for the reception of racks B, secured to the movable top of the seat, and projecting down therefrom, as

shown in Fig. 5, a central dovetailed recess, *f*, in which is adapted to slide a sliding plate, *g*, a lateral circular perforation, *h*, for the passage of the operating-shaft *c*, two longitudinal slots, *i i*, for a purpose to be presently explained, and two laterally-projecting pins, *l l*, arranged on opposite sides of the recess *f* and serving as the pivots of two oscillating blocks, *m m*, as hereinafter explained.

As the mechanism on the front part of the seat-frame is a counterpart of that upon the rear part and operates simultaneously therewith, it will only be necessary to describe one set of mechanism.

Co-operating with the plate *a* are two sliding bolts, *k k'*, the inner ends of which lap past each other and terminate on opposite sides of the recess *f*, and which are supported, so as to permit of their longitudinal movement, by means of offsets or lugs *n<sup>2</sup>*, extending into the longitudinal slots *i* of the plate *a*. The outer ends of these slides are provided with projections or teeth *q q'*, which, when the slides are projected outward, are adapted to engage with the sliding racks B B and lock them in position. The inner ends of the slides are also provided with laterally-projecting studs or pins *o o*, upon which are pivoted levers *n'*, whose inner ends are bifurcated and embrace pins *t t* on the sliding plate *g*, and whose outer ends are adapted to engage with the teeth of the racks B B when the bolts *k k'* are retracted. The blocks *m m*, which are mounted on the pins *l l* of the plate *a*, are slotted, so as to also embrace the pins *t t* on the movable slide *g*, and the rear portions of these oscillating blocks are adapted to co-operate with the depending arms of the inner portions of the bolts *k k'*, as shown in Figs. 1, 2, and 3.

Secured to an offset on the bolt *k* is a longitudinal rod, *r*, whose free end plays through a guide, *s*, on the inner side of the bolt *k'*, and upon this rod *r* is arranged a spiral spring, *w*, which operates to keep the outer ends of both bolts projected.

The vertical moving slide *g* is provided with a cam-shaped slot, in which plays a crank-arm or cam, *z*, secured rigidly to the operating cross-shaft *c*, as shown in Figs. 1, 2, and 3. The outer end of the operating-shaft is preferably square to receive the key or operating-handle *d*.

When the seat proper is adjusted at its nor-

mal height the teeth  $g g'$  on the outer ends of the bolts  $k k'$  are held by the tension of the spring  $w$  in engagement with the racks B B, and the other parts of the mechanism are in the position shown in Fig. 1.

When it is desired to raise the seat the key or handle  $d$  is turned so as to rotate the shaft  $c$  to the left. This causes the cams  $z$  on the shaft to lift the vertical slides  $g$ , and the movement of said slides causes their pins  $t$  to first tilt the blocks  $m m$  and cause the latter to move the bolts  $k k'$  inward out of engagement with the racks B B, and then cause the pins  $t t$  to engage with the fork or bifurcated inner ends,  $n n$ , of the levers  $n' n'$  and rock said levers, so as to depress their outer ends and engage them with the racks. Then, upon turning the shaft backward to the position shown in Fig. 1, the levers  $n' n'$  will be first tilted on their pivots, so as to raise the racks, and then be disengaged from the racks, while the bolts will be projected so as to engage with the racks and hold them at their new point of adjustment.

To lower the seat, instead of raising it, the handle or key  $d$  is first turned to the right, so as to cause the cams  $z$  to throw the slides  $g g$  downward, instead of upward, and cause the pins, blocks, levers, and horizontal bolts to operate upon the racks to lower them, as will be readily understood from the foregoing description. Leaf-springs  $x'$  may be employed to assist in returning the levers  $n' n'$  to their normal horizontal position, if desired.

The lowering and raising of the racks are accomplished tooth by tooth, and where it is desired to adjust the racks more than one tooth in the same direction the operating-handle is turned first to the right and then to the left from the normal point, or vice versa, until the result is accomplished.

It will be seen that a music-stool constructed in accordance with my invention can be raised and lowered with facility to adapt it to persons of different height, and that in whatever posi-

tion it may be adjusted it will afford a firm and steady seat, free from the oscillations and unsteadiness observable in the ordinary form of music-stool.

Having thus described my invention, I claim as new—

1. The combination, with the seat-frame, of the plates  $a b$ , constructed as described, of the slides  $g g$ , having the pins  $t t$ , means for raising and lowering said slides, the pivoted blocks  $m m$ , and the laterally-moving bolts  $k k'$ , substantially as described.

2. The combination, with the seat-frame, of the plates  $a b$ , constructed as described, of the vertically-moving slides  $g g$ , having the pins  $t t$ , the rotatable cross-shaft and the cams upon it for co-operating with said slides, the laterally-moving bolts, the levers  $n' n'$ , pivoted to the laterally-moving bolts, and the racks depending from the seat proper, the whole constructed and operating substantially as described.

3. The combination, with the racks depending from the seat proper, of the laterally-moving bolts, the oscillating blocks, and means for oscillating the said blocks to retract the bolts, and the springs for projecting the bolts into engagement with the racks, substantially as described.

4. The combination, with the racks depending from the seat proper, of the laterally-moving locking-bolts, the levers pivoted to said locking-bolts, the springs for projecting the laterally-sliding bolts, the blocks, and the vertically-moving slide and its pins for retracting said bolts and operating the levers to raise or lower the racks, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDOUARD CALIX.

Witnesses:

G. F. BENNIGHOF,  
CARL HOFMANN.