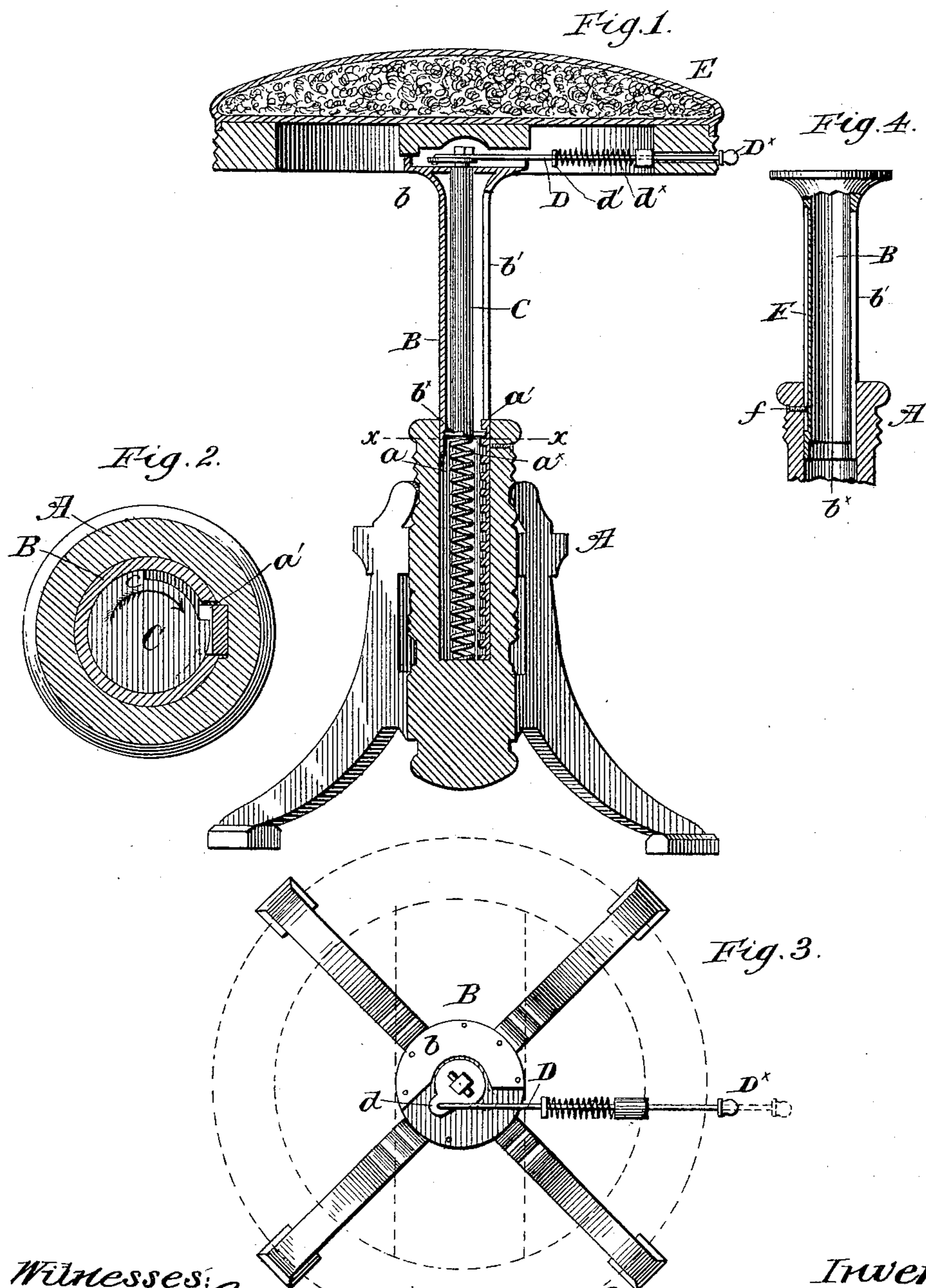


(No Model.)

C. A. HAMMERMILLER.  
VERTICALLY ADJUSTABLE STOOL.

No. 366,479.

Patented July 12, 1887.



Witnesses:

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# UNITED STATES PATENT OFFICE.

CHARLES A. HAMMERMILLER, OF PHILADELPHIA, PENNSYLVANIA.

## VERTICALLY-ADJUSTABLE STOOL.

SPECIFICATION forming part of Letters Patent No. 366,479, dated July 12, 1887.

Application filed September 29, 1886. Serial No. 214,833. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. HAMMERMILLER, a citizen of the United States, residing in the City and County of Philadelphia, in the State of Pennsylvania, have invented an Improvement in Vertically Adjustable Stools or Chairs, of which the following is a specification.

My invention relates to that class of stools or chairs which are provided with vertically adjustable pedestals or supports. I have in the drawings shown, and herein describe, my invention as applied to a piano stool.

In the drawings, Figure 1 is a central partly sectional elevation of a piano stool embodying a good form of my invention. Fig. 2 is a cross-section on the line *x-x* of Fig. 1, sight being taken in an upward direction. Fig. 3 is a top plan view of the pedestal and its attached devices, the seat being removed. Fig. 4 is a view, partly sectional, of the depending sleeve B, designed to illustrate the groove and stud arrangement by which said sleeve is prevented from being entirely withdrawn from the bore *a*.

Similar letters of reference indicate corresponding parts.

In the drawings, A is the base or pedestal of the stool, which may be of any desired external configuration, and which is provided with a vertical bore *a*.

*a'* is a vertical rack secured to the wall of the bore *a*; for the purpose hereinafter described.

*a<sup>x</sup>* is a spiral spring, contained within, and, at its lower end, supported upon, the lower end of the wall of the bore *a*.

B is a metal cylinder, standard, or sleeve, having an enlarged transversely flattened head *b* at its upper end, a longitudinal slot, *b'*, and, intermediate of its length, an internal shoulder or rib, *b<sup>x</sup>*.

C is a metal post, rotatively mounted within the sleeve B, the upper end of said post being provided with a crank arm, *d*. This post extends within the sleeve B to a point below the rib *b<sup>x</sup>*, its lower end being provided with a segmental flange or shoulder *c*. The upper face of the flat head *b* of the sleeve is recessed to an extent sufficient to receive, and allow of the requisite rotative throw of, the crank arm *d*, as is shown in Fig. 3, so that when the seat

E is superimposed thereupon, the movement of said crank arm will not be impeded. The seat may be secured in place upon the head *b* by screws or in any desired manner.

D is what I term the operating pin. It is supported in and passes free for reciprocation through the frame-work of the seat E, its inner extremity being attached to the crank arm *d*, and its outer end equipped with a knob or handle *D<sup>x</sup>*. The normal set of this pin is that shown in the drawings, and it is determined by a spiral spring *d'* which surrounds it, one end of said spring being conveniently supported against the frame-work of the seat E, and the other against a collar or abutment *d<sup>x</sup>* on the pin itself.

F is a longitudinal groove in the sleeve B, on the outer surface thereof, and extending to a point near its lower end. A pin or stud *f* in the upper part of the bore of the pedestal A, is entered in the groove F, and by contact with the lower end of the groove prevents the entire separation of the two members of the pedestal.

Having thus described the construction of a cheap, convenient, and efficient embodiment of my invention, its operation is as follows:

Referring to Fig. 1 it will be seen that the seat is at the highest limit of its movement, the spring *a<sup>x</sup>* extended, and the segmental flange *c* engaged in the upper end of the rack *a'*, and held in such engagement by the operating pin D under the action of its spring *d'*. The sleeve B, and its superimposed seat E, through the instrumentality of the rib *b<sup>x</sup>* rest and are supported upon the segmental flange *c* of the post C. To alter the adjustment of the seat, the knob *D<sup>x</sup>*, at the end of the operating pin, is grasped and drawn outward, its spring compressed, and, through the interposition of the crank arm *d*, the post C rotated until the break or opening in the flange *c* registers with the vertical rack *a'*. The seat E, post C, and sleeve B, can now be forced down together, and the spring *a<sup>x</sup>*, compressed, until the desired point is reached, when, upon releasing the knob *D<sup>x</sup>* the operating pin D under the action of its spring rotates the crank arm and post C so that the flange *c* is again brought into engagement with the rack *a'*.

The details of construction described may

be departed from without changing the nature of my invention. Thus the post C may be provided with a rack and be rotated into and out of engagement with a single stud in the bore of the pedestal.

I am aware that vertically adjustable stools or chairs, having their members adapted to slide telescopically the one within the other, and to lock in given adjustments by the manipulation of a rack and stud arrangement, have heretofore been known, and to such a construction broadly I lay no claim,—as my invention resides in the peculiar and specific construction and arrangement of devices herein described and claimed.

Having thus described my invention, I claim:

1. In a stool, in combination, a base having a vertical bore, the wall of which is provided with a fixed vertically disposed series of inwardly projecting teeth,—a seat provided with a depending tubular sleeve which fits said bore and is longitudinally slotted to embrace and slide past said teeth,—and a post mounted within and moving vertically with said sleeve, and having below said sleeve a projection which may be rotated into or out of engagement with said teeth, substantially as set forth.

2. In a stool, in combination, a base having a vertical bore, the wall of which is provided with a fixed vertical rack projecting out upon said wall,—a seat provided with a depending tubular sleeve which fits said bore and is longitudinally slotted to embrace and slide past said rack,—a post mounted within so as to move vertically with said sleeve but free for rotative movement with respect to the same, and provided below said sleeve with a rack-engaging projection,—and an operating crank

arm attached to the upper extremity of said post, substantially as set forth.

3. In a stool, in combination, a base having a vertical bore, the wall of which is provided with a fixed vertical rack projecting out from said wall; a spiral spring contained within said bore; a seat provided with a depending tubular sleeve which fits said bore and is longitudinally slotted to embrace and slide past said rack; a post mounted within so as to move vertically with said sleeve but free for rotative movement with respect to the same, and provided below said sleeve with a rack-engaging projection; and an operating crank arm attached to the upper extremity of said post, substantially as set forth.

4. In a stool, in combination, a base having a vertical bore, the wall of which is provided with a fixed vertical rack projecting out upon said wall,—a seat provided with a depending tubular sleeve which fits said bore, is longitudinally slotted to embrace and slide past said rack, and is provided with an internal shoulder,—a post mounted within so as to move vertically with said sleeve but free for rotative movement with respect to the same, and provided below said sleeve with a projection which may be rotated into or out of engagement with said rack and also serves to take the weight of the seat and depending sleeve through the internal shoulder of the latter, substantially as set forth.

In Testimony Whereof I have hereunto signed my name this 24th day of September, A. D., 1886.

CHARLES. A. HAMMERMILLER.

In the presence of

WM C STRAWBRIDGE,  
JOHN JOLLEY JR