(No Model.) 2 Sheets—Sheet 1.

T. S. DISSTON.

ADJUSTABLE STOOL AND SEAT.

No. 348,386. Patented Aug. 31, 1886.

FIG. 1.

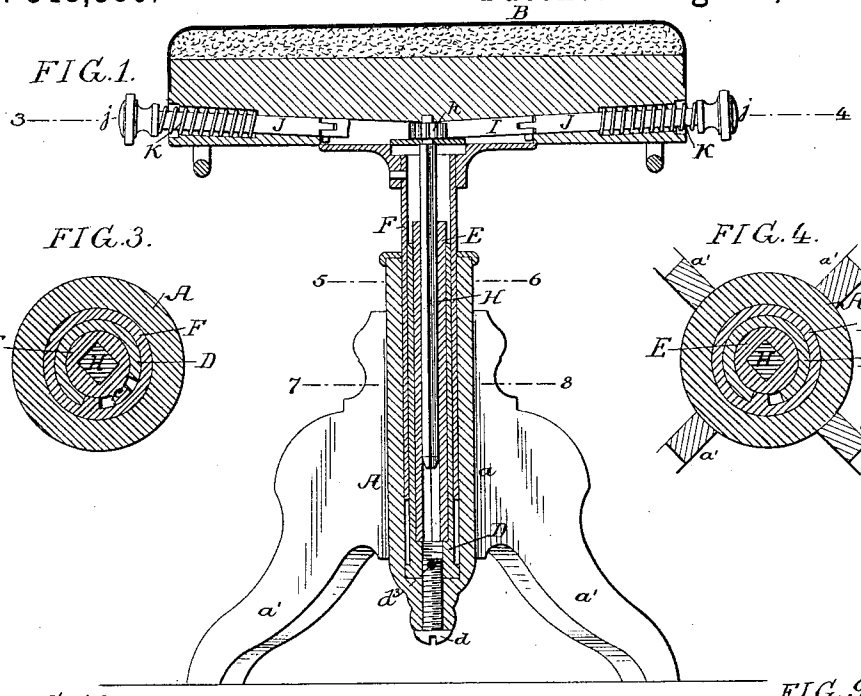


FIG. 3.

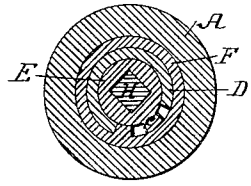


FIG. 4.

FIG. 10.

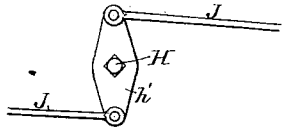


FIG. 9.

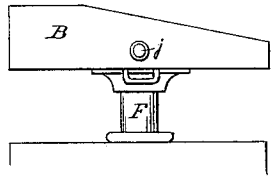
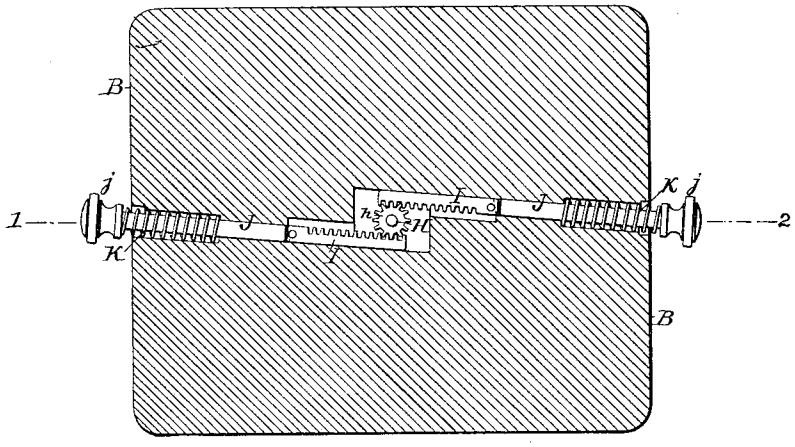


FIG. 2.



Witnesses:
David S. Williams.
John E. Parker

Inventor:
Thomas S. Disston
by his Attorneys
Howson & Sons

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

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FIG. 8.

FIG. 7.

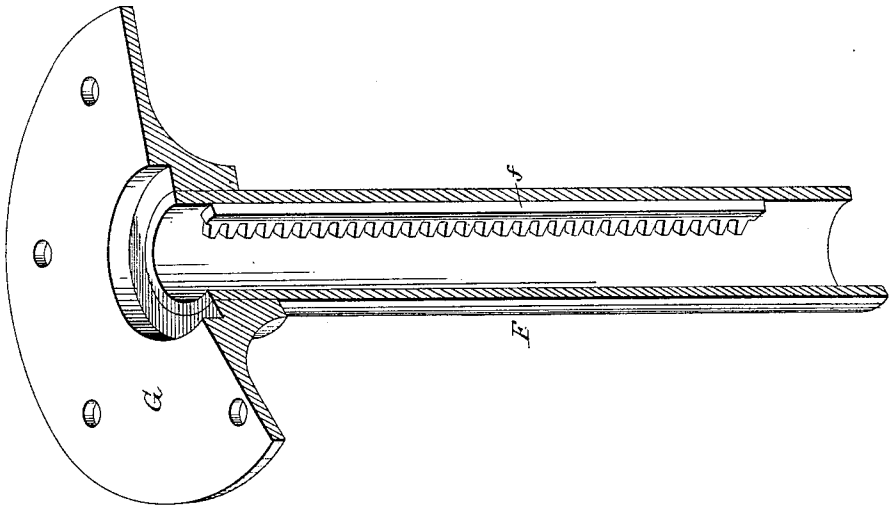


FIG. 6.

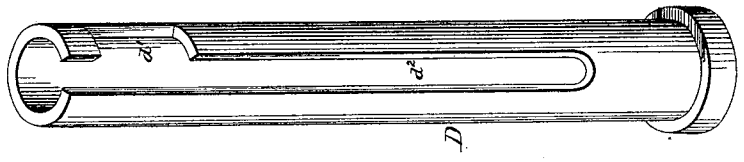
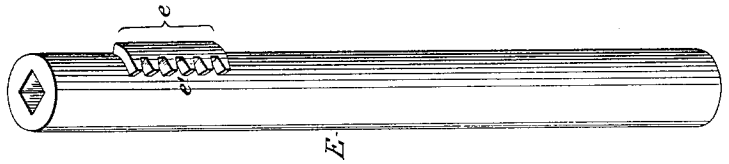


FIG. 5.



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John E. Parker

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Thomas S. Disston
by his Attorneys
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N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

THOMAS SPENCER DISSTON, OF PHILADELPHIA, PENNSYLVANIA.

ADJUSTABLE STOOL AND SEAT.

SPECIFICATION forming part of Letters Patent No. 348,386, dated August 31, 1886.

Application filed February 15, 1886. Serial No. 191,980. (No model.)

To all whom it may concern:

Be it known that I, THOMAS SPENCER DISSTON, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Adjustable Furniture, of which the following is a specification.

My invention consists of improvements in the construction of vertically-adjustable stools, chairs, tables, or other like articles of furniture, as fully described hereinafter.

In the accompanying drawings, Figure 1 is a vertical section of my improved adjustable stool on the line 1 2, Fig. 2. Fig. 2 is a sectional plan on the line 3 4, Fig. 1. Fig. 3 is a sectional plan drawn to an enlarged scale on the line 5 6, Fig. 1. Fig. 4 is a sectional plan on the line 7 8, Fig. 1. Figs. 5, 6, 7, and 8 are detached perspective views of parts of the stool. Fig. 9 is a view showing a desk embodying my improvements, and Fig. 10 is a view of a modification.

In Figs. 1 to 4 of the drawings I have shown my invention as applied to a piano-stool; but it will be readily seen that it can be applied to a desk, table, or any article of furniture the top of which has to be raised or lowered.

A is the base of the stool, formed of a central block, *a*, and legs *a'*, Fig. 1.

B is the top or seat of the stool, which I have shown rectangular in the present instance.

The block *a* of the base is bored out to nearly its full extent, and in this tubular portion is secured a tube, D, Fig. 6, by a bolt, *d*, and pin d^3, or by the pin alone or other suitable device, by which it is rigidly fastened and prevented from turning. In this tube D is a locking-bolt, E, provided with a projection, *e*, Fig. 5, on one edge of which is cut one or more teeth, *e'*. A recess, *d'*, is formed in the tube D, for the reception of this projection *e*, and the tube D is also slotted at d^2 nearly its whole length for the reception of a rack, *f*, fixed on a tube, F, Fig. 7, which is free to traverse vertically between the block *a* and the tube D, Fig. 1. The tube F, when its rack is not in gear with the projection *e*, is free to be raised or lowered, but when in gear with the said projection is firmly locked. Secured to or forming part of the tube F is a top plate or flange, G, which is secured to the under side of the seat B, so that said tube F is caused to move vertically with the seat.

The bolt E is tubular, having in the present instance a square hole, to which is adapted a squared rod, H, Fig. 8. This rod is carried by the seat B, but is free to turn therein, and as the rod can slide vertically in the bolt E the turning of the said rod can throw the bolt either into or out of gear with the rack *f* on the inner side of the tube F. To turn this rod, I have shown in Figs. 1, 2, and 8 a pinion, *h*, secured to the upper end of the rod H and meshing with the teeth of two racks, I I, secured to bars J J, which pass through a portion of the seat.

On the end of each rod is a push-button, *j*, with an intermediate retracting-spring, K. By pressing these buttons *j* the rod H is partially rotated, so as to turn the bolt E and free the teeth of the projection *e* from gear with the rack *f*, thus allowing the stool to be raised or lowered.

When the seat is adjusted to the right height, the buttons *j* are released and the springs K force the teeth *e'* of the projection *e* to mesh with the teeth of the rack *f* again, so that the seat will be locked in the position to which it has been adjusted.

The seat is prevented from turning by the rack *f* of the tube resting in the slot d^2 of the fixed tube D.

In place of the racks I and pinion *h* a lever, *h'*, Fig. 10, may be used with one or both arms attached to a rod or rods, J, having suitable push-buttons, as in Fig. 1.

In Fig. 9 I have shown my device applied to a reading or drawing desk, the top B of which can be readily elevated or depressed by the user, as described above with reference to the stool.

I am aware that an adjustable stool has been heretofore constructed in which the sliding stem of the stool was provided with an adjustable pawl or catch for engagement with a fixed rack in the base, and I therefore do not claim, broadly, the combination of the base and stem of the stool with a rack and pawl or catch for permitting the adjustment of the seat in respect to the base.

I claim as my invention—

1. The combination of the base, a rack sliding in the base and movable with the top or seat of the structure, a bolt confined vertically to but free to turn in the base and constructed

to engage with the rack, and a rod projecting downward from said top or seat and engaging with the locking-bolt, all substantially as specified.

2. The combination of the base, a rack sliding in the base and movable with the top or seat of the structure, a locking-bolt confined vertically to the base, but free to turn therein, and constructed to engage with the rack, a rod projecting downward from the top or seat and engaging with the locking-bolt to turn the same, one or more push-buttons carried by the seat, and means, substantially as described, whereby the movement of said push button or buttons is transmitted to the bolt-operating rod, all substantially as specified.

3. The combination of the base, a slotted tube confined thereto, a rack movable with the top or seat of the structure and guided in the slot of the tube, a bolt contained in the tube and having a lug or projection contained in a recess in the said tube and constructed to engage with the rack, and a rod projecting downward from the top or seat and engaging with said bolt, all substantially as specified.

4. The combination of the base, the slotted tube D, confined thereto, the tube E, confined to the top or seat and having a rack adapted to said slot, the bolt E, with its locking-lug *e*, and the operating-rod H, carried by the top or seat and engaging with the bolt, as set forth.

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

THOMAS SPENCER DISSTON.

Witnesses:

WILLIAM F. DAVIS,

HENRY HOWSON.