(No Model.)

F. A. CHANDLER.

ADJUSTABLE SUPPORTING STANDARD FOR SCHOOL DESKS AND SEATS.

No. 486,822. Patented Nov. 22, 1892.

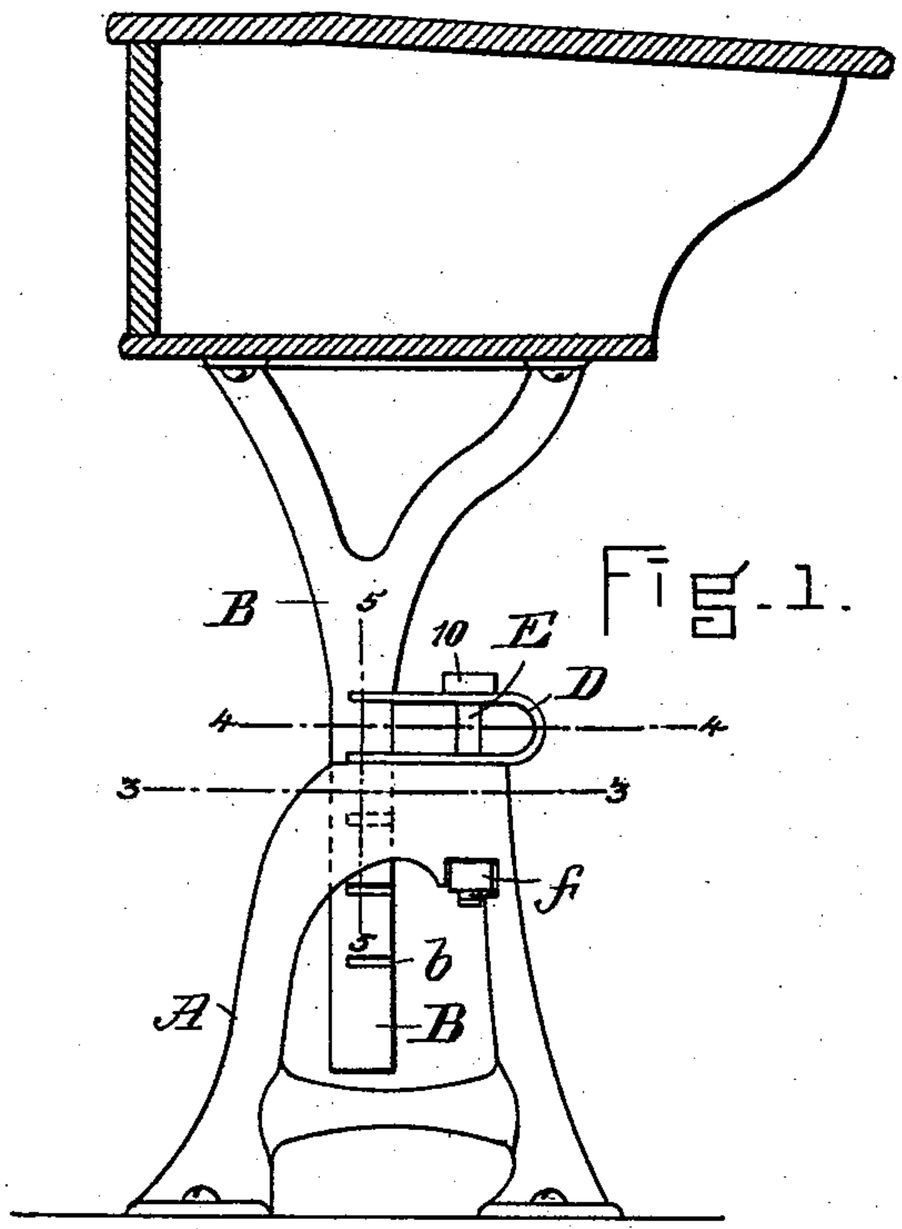


Fig. 1.

Fig. 2.

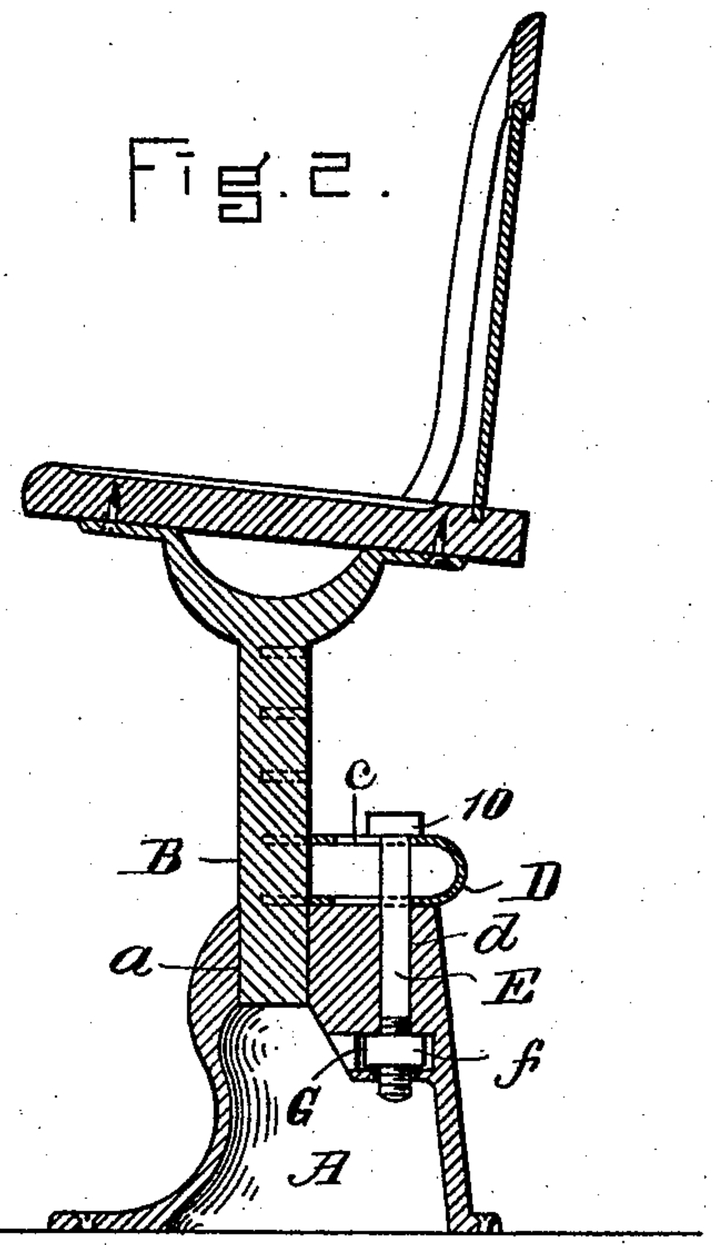


Fig. 3.

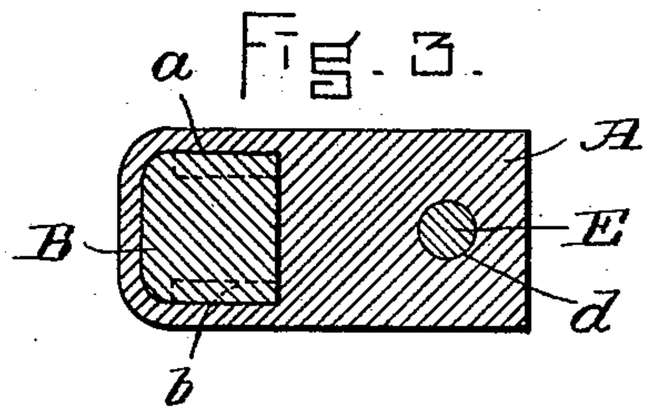
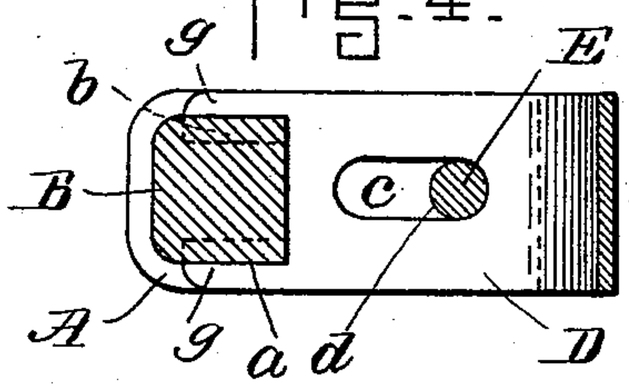


Fig. 4.



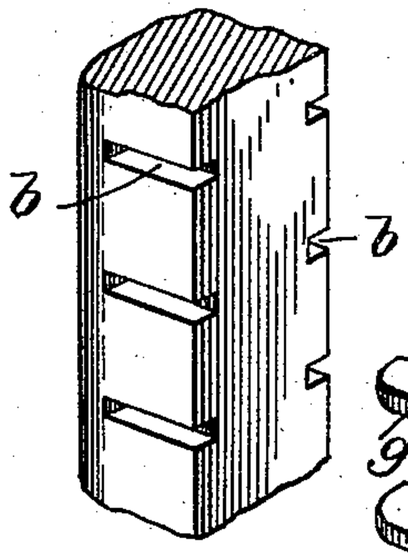
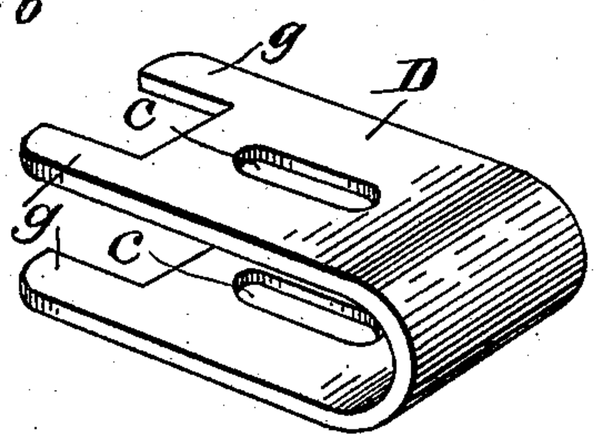


Fig. 6.



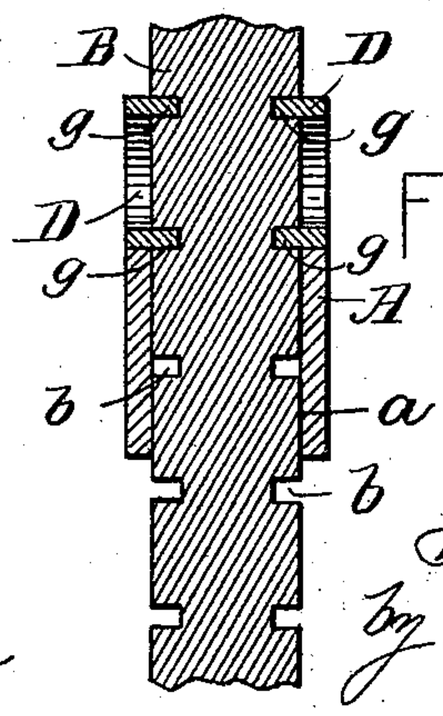


Fig. 5.

WITNESSES.

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UNITED STATES PATENT OFFICE.

FREDERIC A. CHANDLER, OF SOMERVILLE, MASSACHUSETTS.

ADJUSTABLE SUPPORTING-STANDARD FOR SCHOOL DESKS AND SEATS.

SPECIFICATION forming part of Letters Patent No. 486,822, dated November 22, 1892.

Application filed April 7, 1892. Serial No. 428,209. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC A. CHANDLER, a citizen of the United States, residing at Somerville, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Adjustable Supporting-Standards for School Desks and Seats, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a sectional elevation of my adjustable supporting-standard applied to a school-desk. Fig. 2 is a vertical section of a similar standard applied to a school-seat. Fig. 3 is a horizontal section on the line 3 3 of Fig. 1. Fig. 4 is a horizontal section on the line 4 4 of Fig. 1. Fig. 5 is a vertical section on the line 5 5 of Fig. 1. Fig. 6 is a detail in perspective representing the locking-spring and a portion of the upright with which it engages.

Non-adjustable school desks and seats are usually made in several different sizes to meet the requirements of scholars of various ages or statures, and in large cities, where frequent changes are required in the arrangement and sizes of school desks and seats, it is customary for the authorities to keep a considerable number of each size in stock ready for immediate use whenever additions or changes are required. Considerable storage-room is consequently necessary, and whenever changes are to be made much expense is incurred in removing and replacing the school furniture and transporting it to and from the storehouse.

My invention relates to supporting-standards for that class of school desks and seats which are capable of vertical adjustment in order to avoid this trouble and expense, and has for its object to enable a school desk or seat to be easily and quickly adjusted to form a series of standard or graded sizes without any special measurement or care being required to determine the height of the desk or seat from the floor.

To this end my invention consists in a desk or seat supporting standard composed of a lower portion or base and an upright or upper portion provided with a series of grooves or recesses and adapted to slide vertically within said base, combined with a double or U-shaped spring adapted to slide horizontally on said base, whereby it may be advanced to engage the grooves or recesses in the vertically-sliding upright or withdrawn therefrom to release said upright and permit of its vertical adjustment, said spring being secured in place when adjusted by a clamping-bolt passing through the same, as hereinafter more particularly set forth.

In the said drawings, A represents the lower portion or base of the standard, which is preferably composed of cast-iron and may be of any suitable shape or design to suit the purpose for which it is to be used, said base being adapted to be secured to the floor by means of screws in a well-known manner.

Within an aperture *a* in the base A is fitted to slide vertically therein an upright B, which forms the upper portion of the standard and upon which is to be secured the desk or seat to be supported.

In Fig. 1 my improved standard is represented as supporting one end of a school-desk, and in Fig. 2 the standard is shown as applied to a school-seat. The upright B is provided on two of its opposite sides, as seen in Fig. 6, with a series of horizontal grooves or recesses *b*, placed at equal distances apart and adapted to be engaged by the outer ends of a double or U-shaped flat steel-spring D, whereby the upright B is held at the desired height, according to the location of the grooves with which said spring is engaged. The lower member of the spring D rests upon the top of the base A, taking a firm bearing thereon, as seen in Figs. 1 and 2, and said spring is provided with slots *c c*, through which passes a vertical bolt E, which extends down through an aperture *d* in the base, beneath which it is provided with a nut *f*, said bolt serving to clamp the spring D when the latter is pushed forward to cause its outer ends to enter the grooves *b*, the slots *c c* enabling the spring to be drawn back sufficiently to clear the upright B when it is desired to raise or lower the same to bring different grooves *b* into line with the ends of the spring, after which the spring is again slid forward and clamped by means of the bolt E, the head 10 of which

rests on the upper member of the spring. The outer ends of the two branches or members of the spring D are each bifurcated, as seen in Fig. 6, to enable them to embrace the upright B and enter the grooves *b* on its opposite sides, the width of the bifurcations *g* being such that when engaged with the grooves *b* they will lie partly within and partly outside of the same, so that the bifurcations of the lower member of the spring D will take a firm bearing on the top of the base A on either side of the upright B, as seen in Figs. 4 and 5, thus supporting the same with additional solidity and firmness.

The bolt E is to be tightened and loosened by means of a wrench applied to its head 10, and when tightened a downward pressure will be exerted upon the upper member of the spring D, causing it to hold the upright B steady and prevent any rattling or loose motion which might otherwise occur by reason of inaccuracy in the fitting of the parts, and when thus clamped the removal of the desk or seat from the fixed portion of the standard by scholars or unauthorized persons will be effectually prevented.

By placing the grooves or recesses *b* in the upright B at certain stated distances apart the height of the desk or seat may be readily adjusted to produce a series of standard or well-known sizes, thus avoiding the necessity of any measurement or special care in making the adjustment, other than to bring the proper grooves *b* opposite to the ends of the spring D, which can then be slid forward and clamped by the bolt E, as before described.

As the base A of the standard for a seat is usually hollow, as seen in Fig. 2, and its interior not accessible when screwed to the floor, I provide said base with a pocket G, open in front and adapted to receive and hold the nut *f*, as seen in Fig. 2, in a position to receive the threaded end of the bolt E when thrust down through the aperture *d* in the base A. With the desk-standard shown in Fig. 1 this pocket is unnecessary, as the base of the standard is open at the sides, and consequently the nut *f* can be held up by the fingers until engaged by the bolt E.

With the standard shown in the drawings four different sizes or variations in height may be produced; but it will be obvious that the upright B may be provided with any desired number of grooves or recesses *b* and that their distance apart may be varied according to the requirements of the case.

The above-described desk and seat supporting standard is simple, durable, and inexpensive, and by its use the number of spare desks and seats necessary to keep on hand for changes or emergencies may be materially reduced, thus effecting a considerable saving in cost, storage, and transportation.

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

1. A supporting-standard for school desks and seats, composed of a lower portion or base A and an upright or upper portion B, provided with grooves or recesses and adapted to slide vertically within said base, combined with a double or U-shaped spring D, adapted to slide horizontally on said base and engage the grooves or recesses in the vertically-sliding upright, and a clamping-bolt E, passing through said spring and adapted to hold the same when slid forward to lock the upright at the desired height, substantially as set forth.

2. In a supporting-standard for school desks and seats, the combination of the lower portion or base A, the upright or upper portion B, provided on opposite sides with a series of horizontal grooves or recesses *b* and adapted to slide vertically in said base, the double or U-shaped spring D, provided with slots *c c* and having the outer ends of its two branches or members bifurcated to embrace the upright B and enter the grooves *b* on its opposite sides, the lower member of said spring resting on the base A and sliding horizontally thereon, and the vertical bolt E and nut *f*, said bolt passing through the slots *c c* of the spring, whereby the latter is clamped when adjusted to hold the upright at the desired height, all constructed to operate substantially as and for the purpose described.

3. In a supporting-standard for school desks and seats, the combination of the base A, the upright B, provided on opposite sides with a series of horizontal grooves or recesses *b* and adapted to slide vertically in said base, the double or U-shaped slotted spring D, having the outer ends of its two members or branches bifurcated to embrace the upright B and enter the grooves *b*, the bifurcations at the outer end of the lower member of said spring lying partly within the grooves *b* and partly outside the same, whereby they are adapted to take a firm bearing upon the top of the base A on either side of the upright B, and the clamping-bolt E, passing through the spring D to hold the same when adjusted, substantially as set forth.

4. The combination of the base A and vertically-sliding upright B, provided with grooves or recesses *b*, the slotted double or U-shaped spring D, sliding horizontally on the top of the base A and adapted to engage the grooves or recesses *b*, the vertical bolt E, passing through the slots of the spring D and provided with a nut *f*, and the pocket G on the under side of the base A, open on one side to receive said nut *f* and adapted to hold the same in position to receive the end of the bolt when thrust down through the aperture *d* of the base A, substantially as set forth.

Witness my hand this 4th day of April, A. D. 1892.

FREDERIC A. CHANDLER.

In presence of—

P. E. TESCHEMACHER,

HARRY W. AIKEN.