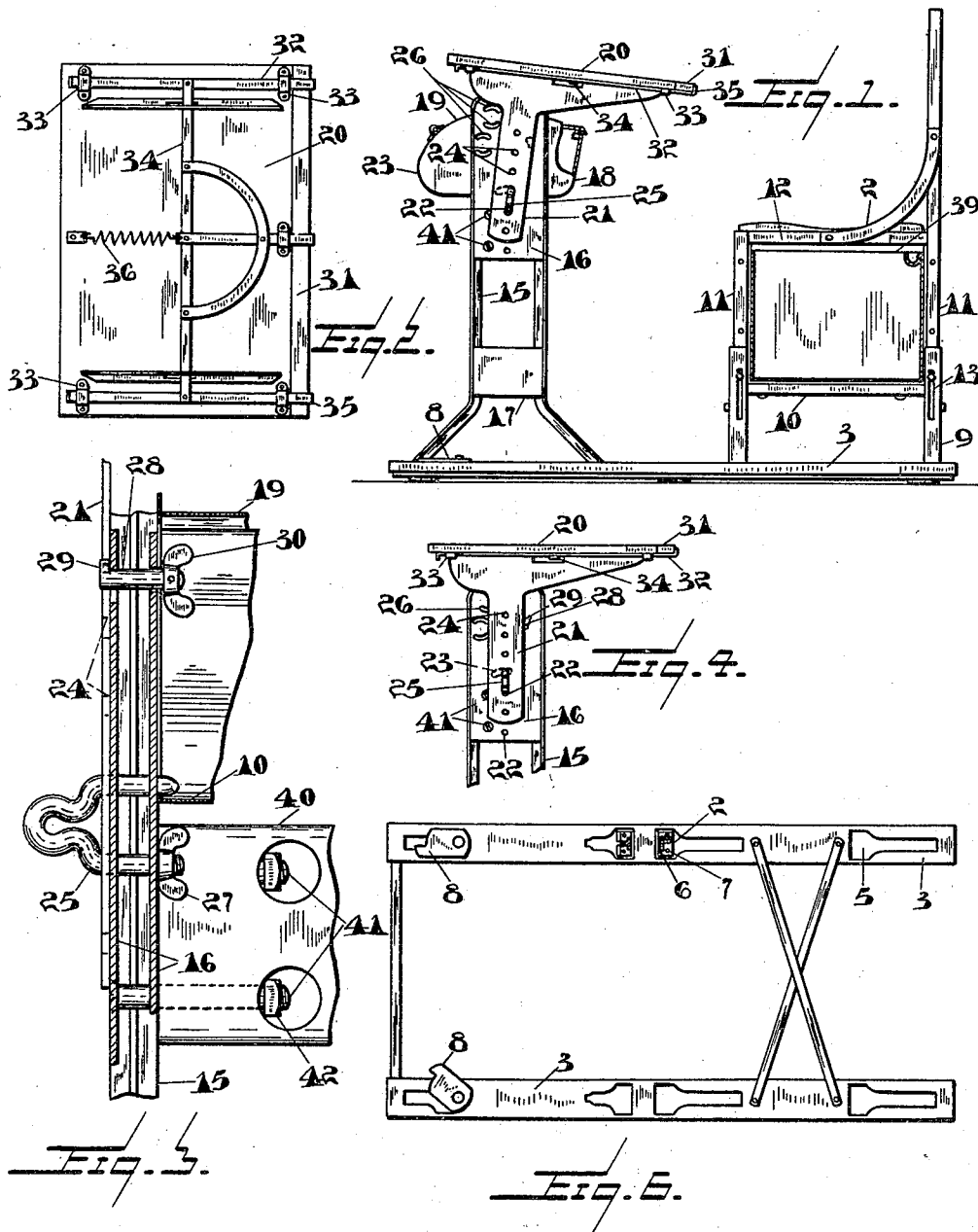


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SCHOOL DESK AND SEAT.
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2 SHEETS—SHEET 1.



WITNESSES.
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A. M. Lewis.

INVENTOR.
E. N. Moyer
BY J. Edward Maybee
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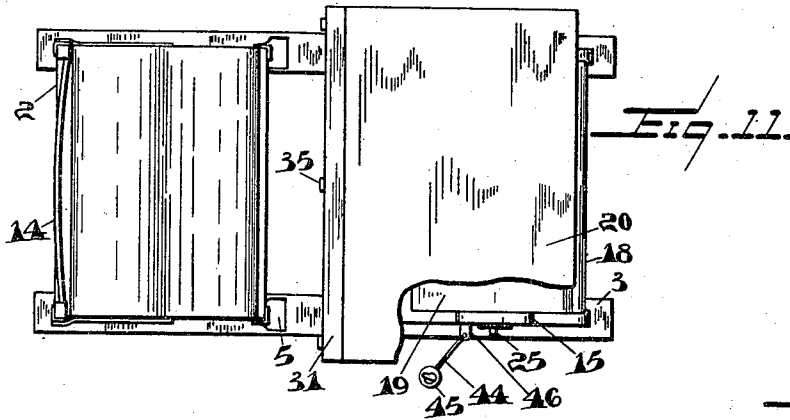
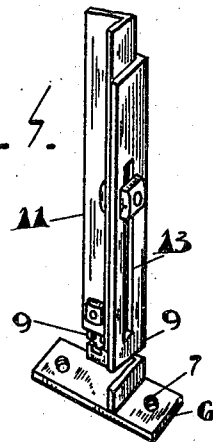
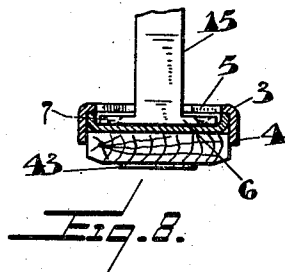
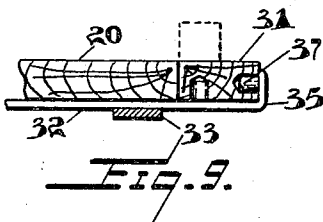
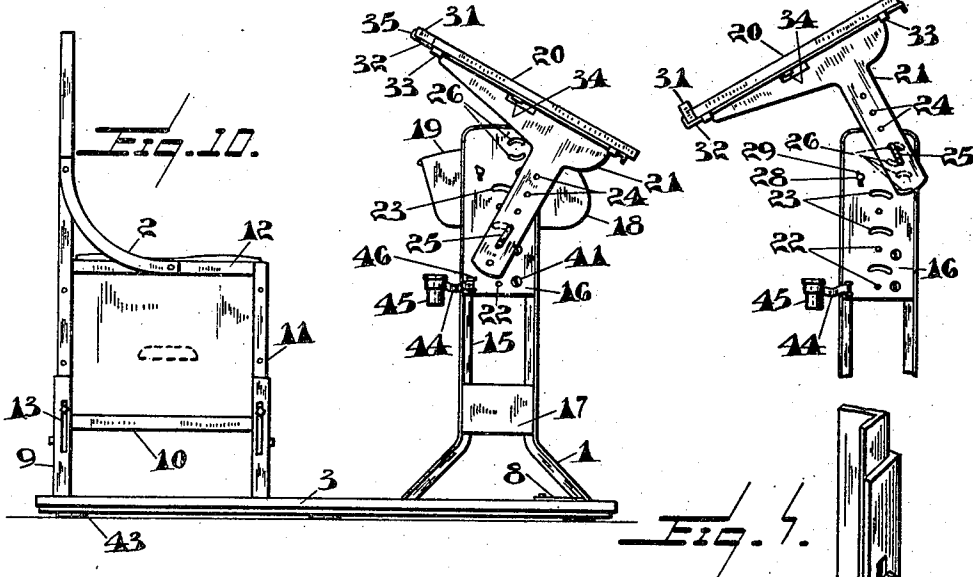


Fig. 5.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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SCHOOL DESK AND SEAT.

1,246,981.

Specification of Letters Patent.

Patented Nov. 20, 1917.

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To all whom it may concern:

Be it known that I, ELI N. MOYER, of the city of Toronto, in the county of York, Province of Ontario, Canada, a subject of the King of Great Britain, have invented certain new and useful Improvements in School Desks and Seats, of which the following is a specification.

There is at the present time an increasing demand for school seating and desk accommodation which is not fixed to the floor so that it may be easily rearranged to suit the convenience of a class or removed entirely. Under some circumstances also it is desirable to be able to remove the desks and leave the seats or vice versa. While it is desirable that a desk and seat be held in fixed relationship when in use, it is also desirable that the distance between them should be adjustable. Adjustment of height is also necessary for both desks and seats. Heretofore it has been usual to employ desks with slightly sloping tops, but a demand for horizontal tops is now arising, hence it is desirable to have a desk which may be adjusted to either position according to the demand.

There is also a demand for a desk which can be used for drawing, as well as writing, which necessitates the arrangement of the desk so that the top may be considerably raised, tilted to a greater angle and provided with a ledge at the bottom.

My object is to devise a desk which will satisfactorily attain the above objects at a reasonable cost. I attain my object by means of the constructions hereinafter described and as illustrated in the accompanying drawings in which—

Figure 1 is a side elevation showing a desk unit and chair unit connected to a base;

Fig. 2 a plan view of the under side of the desk top;

Fig. 3 a sectional detail on an enlarged scale illustrating the adjusting means for the desk top;

Fig. 4 a side elevation of part of the desk showing the top in horizontal position;

Fig. 5 a similar view showing the top arranged as a drawing table;

Fig. 6 a plan view of the base;

Fig. 7 a perspective detail showing the means for adjusting the seat vertically;

Fig. 8 a cross sectional detail showing the leg of one of the school furniture units in the hollow side member of the base;

Fig. 9 a sectional detail of the adjustable ledge strip;

Fig. 10 a side elevation showing the desk top folded back to permit the pupil to stand up in front of his seat;

Fig. 11 a plan view of the desk and chair in position on the base, showing also the inkwell attachment.

In the drawings like numerals of reference indicate corresponding parts in the different figures.

The equipment includes a desk unit 1, a chair unit 2 and usually a base unit 3 to which the desk and chair are removably connected.

The base is formed of hollow side members 4, suitably braced together. Key hole slots 5 are formed in the upper sides of these members adapted to receive the feet 6 formed at the lower end of the legs of the desk and chair units. These feet are preferably flanged in T form and the keyhole slots are cut accordingly. The flanges of the feet are also provided with screw holes 7 so that the feet may be secured to the floor, instead of being connected with the base, in cases where such an arrangement is desirable.

One or both sets of slots are preferably sufficiently long to permit of the two units being adjusted to or from one another. Preferably, however, the desk unit is locked in position and pivoted latches 8 are provided for this purpose, (see Fig. 6), the chair unit being readily movable in its slots so that the user may easily adjust the position of the seat or chair to suit his requirements.

To facilitate the sliding of the base on the floor blocks or gliders 43 of hard smooth material are inserted into the under side of each side member 4, (see Fig. 8).

The legs of the chair are divided, the upper parts 9 of the legs being suitably braced together by the cross braces 10. The upper parts 11 of the legs are adapted to slide within the lower parts 9 and are also connected by cross braces 12. Preferably both the parts 9 and 11 are formed of metal angle bars as shown. Bolt and slot connections 13 provide means for clamping the parts together with the chair seat at any desired height within the limits of adjustment.

The seat, it will be noticed, is curved only in a direction from the front to the back, not crosswise, and thus meets modern re-

quirements. The back 14 of the chair is also but slightly curved, this feature also meeting modern requirements.

Between the upper parts of the chair legs
5 a book drawer 39 is adapted to slide.

The sides 15 of the desk are preferably formed of T angle bar members connected by plates 16 and 17 welded thereto. Between the sides is suitably secured a book
10 receptacle 18 of any suitable material. If of metal, its ends may be spot welded or otherwise secured to the inner plates 16. This receptacle is provided with a hinged cover 19.

15 A wooden cross brace 40 connects the opposite sides of the desk and is secured in place by bolts 41 passing through the plates 16 and set up by nuts 42, holes being formed in the cross brace to receive the nuts as
20 shown in Fig. 3.

The desk top 20 is preferably formed of wood and has depending arms 21 of metal secured thereto. These arms fit outside of and close to the outer plates 16. Each
25 outer plate 16 has a vertical series of holes 22 formed therein, each hole having an arc shaped slot 23 concentric therewith. The depending arms 21 have at least one pair of holes 24 formed therein, though, for pur-
30 poses which will hereafter appear, a series of such pairs of holes are provided, two holes of each pair being spaced apart a distance substantially equal to the distance between any one of the holes 22 and the arc-
35 shaped slot concentric therewith.

A U-shaped pin 25 is provided adapted to pass through any of the pairs of holes 24. One leg of the pin will also pass through one of the holes 22 and the other leg
40 through a corresponding arc-shaped slot 23. The desk top may thus be tilted from either of the positions shown in Figs. 1 and 4 to the position shown in Fig. 10 to enable the pupil to stand up between his desk and
45 chair.

To adjust the desk top to any desired height, the U-shaped pins are removed and re-arranged with any other of the holes 22 and its arc-shaped slot 23. It is preferable
50 not to change the position of the pin relative to the arms 21 as this would vary the arc through which the desk top would swing, which is not desirable.

The purpose of having a plurality of
55 pairs of holes 22 is to enable the top of the desk to be adjusted for use as a drawing table. For this purpose I provide a pair of concentric slots 26 toward the forward upper corner of each outer plate 16, these slots
60 being spaced substantially the same distance as the pairs of holes 24. When the desk top is to be used for drawing purposes, the U-shaped pins 25 are passed through any suitable pairs of holes 24 and through the
65 concentric slots 26. The top may then as-

sume the position shown in Fig. 5 or may be swung forward out of the way when the pupil desires to stand up.

It is preferable to provide one of the ends of each U-shaped pin with a wing nut 27
70 threaded thereon by means of which it may be secured in place.

When the arms 21 swing rearwardly to the limits of the arc-shaped slots 23, the desk top will be slightly inclined as shown
75 in Fig. 1, this being the position now commonly employed. There is a growing demand, however, for the flat top desk, and this I can obtain by providing a removable stop or stops limiting the rearward swing of the arms. I show for my purpose a pin 28
80 passing through both plates 16 at one side and adapted, when projected, to be engaged by the rearward edge of one of the depending arms 21, (see Fig. 4). To prevent this
85 pin being removed and lost, I provide it at its outer end with a projection 29 and suitably slot the outer plate 16 for the passage of this projection. A round hole, however, is formed in the inner plate 16 so that the
90 pin cannot be withdrawn by pulling it inwardly. A nut 30, or other suitable means by which it may be handled, is fixedly secured to its inner end so that it cannot be removed by the pupil. This pin or stop 28
95 is thus easily projected or retracted at will to allow the desk top to swing to the position shown in Fig. 1 or to be retained in the position shown in Fig. 4.

When the desk top is to be used as a
100 drawing table it is necessary to provide its lower side with a ledge. For this purpose I provide a removable strip 31. This strip normally rests flat on the slides 32 movable in guides 33 secured to the under side of
105 the desk top. These slides are connected by cross bracing 34 so that they will move together. Their outer ends are turned up to form the hooks 35 to engage the strip 31. A coil spring 36 connected to the under
110 side of the desk and to the cross brace tends to draw the slides to grip the strip 31. Inwardly projecting pins 37 are formed on or secured to the hooks 35 and are adapted to enter holes in the edge of the strip to re-
115 tain the strip in the position shown in Figs. 1, 4 and 9. Another set of holes, see Fig. 9, is formed in the under side of the strip so that the strip may be turned up to the position shown in Fig. 5 and reengaged by
120 the pins 37. This strip is easily released at any time and reset by pulling out the slides 32.

As the desk top is movable it cannot be readily equipped with an ink well, and I
125 therefore provide a swinging arm 44 adapted at its outer end to receive the ink well 45 and pivoted at its inner end on a bracket 46 suitably secured to one of the plates 16 as shown.

From the above description it will be seen that I have devised constructions which satisfactorily answer the following requirements which experience has shown should be met by school seating and desk equipment.

The desk and seat may be used independently or as a double unit connected to the base.

10 The desk and seat may be adjusted to and from one another.

Both the desk top and chair may be adjusted in height.

15 The desk top may be used either level or slightly sloping, and it may also be raised and given a further inclination for use as a drawing table.

20 The top of the desk swings forward out of the way to enable the pupil to stand up between the desk and chair, thus avoiding the necessity of using a hinged seat, and enabling me to place a book drawer beneath the seat.

25 A book receptacle is provided in the desk, which is readily accessible when the desk top is swung forward.

30 When the units are employed connected to the base, they may be moved around to meet the requirements of the class. They are also easily moved to one side to enable the room floor to be properly cleaned.

35 Whenever the school room is required for meetings or social gatherings, the floor may be easily entirely cleared and chairs substituted or the desks removed and the seats retained.

40 In up-to-date educational establishments, it is frequently deemed desirable to enable the pupils to assemble in groups or to have their seats moved around in various arrangements, and to this my seat and desk equipment readily lends itself.

45 It will be noted that in my construction the entrance of the pupil may be from either side of the desk, which is not possible with combined chair and desk units at present on the market.

What I claim as my invention is:

50 1. In school furniture, a desk unit comprising suitably connected sides, each side having a hole formed therein and an arc-shaped slot concentric with the hole; a top provided with depending arms each having two holes formed therein; and means for
55 each side adapted to pass through the two holes in the arm and through the hole in the side and its concentric arc-shaped slot.

2. In school furniture, a desk unit comprising suitably connected sides, each side

60 having a hole formed therein and an arc-shaped slot concentric with the hole; a top provided with depending arms each having two holes formed therein; and means for each side adapted to pass through the two
65 holes in the arm and through the hole in the side and its concentric arc-shaped slot comprising a U-shaped pin and a nut threaded on one end thereof.

3. In school furniture, a desk unit comprising suitably connected sides, each side
70 having a hole formed therein and an arc-shaped slot concentric with the hole; a top provided with depending arms each having two holes formed therein; and means for each side adapted to pass through the two
75 holes in the arm and through the hole in the side and its concentric arc-shaped slot; and a movable stop determining a position for the top intermediate its extremes.

4. In school furniture a desk unit comprising suitably connected sides; a top provided with depending arms pivotally connected to the sides; means limiting the
80 swing of the arms in either direction; and a movable stop determining a position for the top intermediate its extremes.

5. In school furniture a desk unit comprising suitably connected sides, a book receptacle, with a hinged cover, secured between the sides; a desk top with depending arms
90 pivotally connected with the sides; and means limiting the backward and forward swing of the arms.

6. In school furniture a desk unit comprising suitably connected sides each side
95 having a hole and concentric slot formed therein and a pair of concentric arc-shaped slots formed therein farther forward than and above said hole and slot; a top provided with depending arms each having a
100 series of holes formed therein spaced similarly to the holes and slots aforesaid; and means for each side adapted to pass through two holes in the arm and through the hole and its corresponding slot or the two concentric slots in the side.

7. In school furniture, a desk unit comprising suitably connected sides, each side
110 having a pair of concentric arc-shaped slots formed therein; a top provided with depending arms each having a series of holes formed therein spaced similarly to the slots aforesaid; and means for each side adapted to pass through two holes in the arm and through the two concentric slots in the side.

115 Signed at Toronto this 22nd day of Feb. 1917.

ELI N. MOYER.