R. M. SMITH.

SCHOOL DESK.

APPLICATION FILED FEB. 15, 1913.

1,092,180.

Patented Apr. 7, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

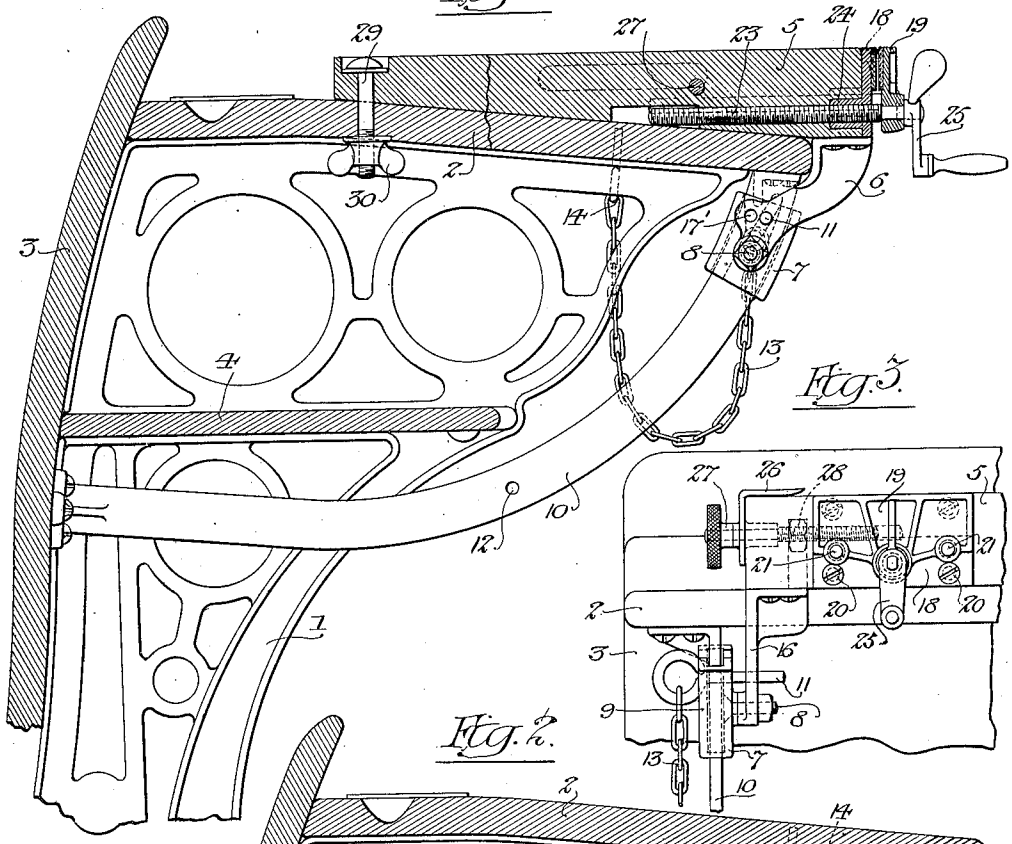
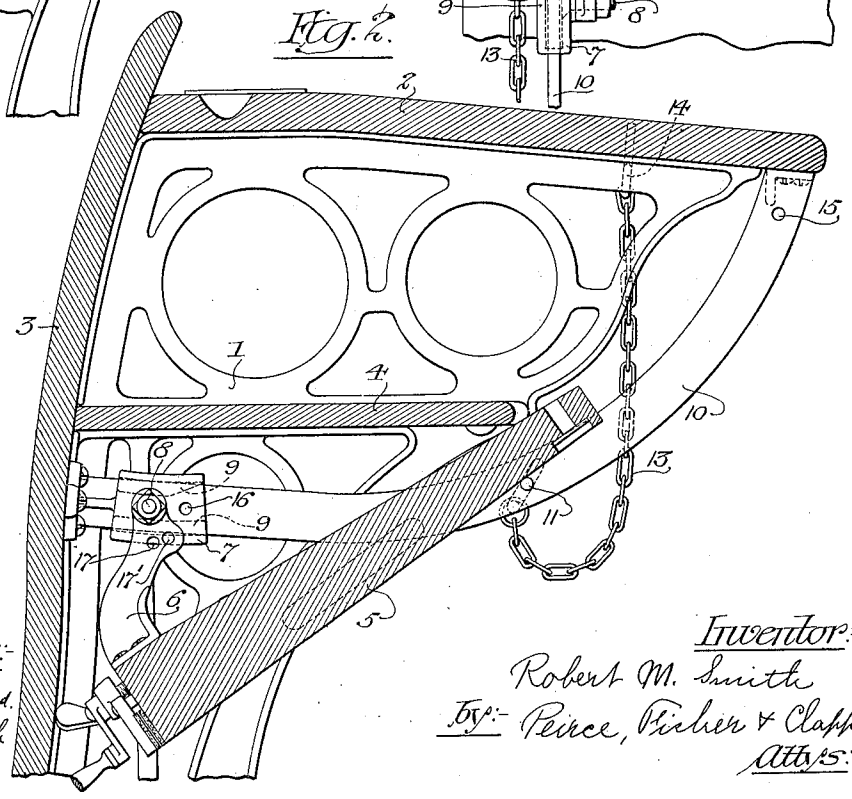


Fig. 3.

Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 4.

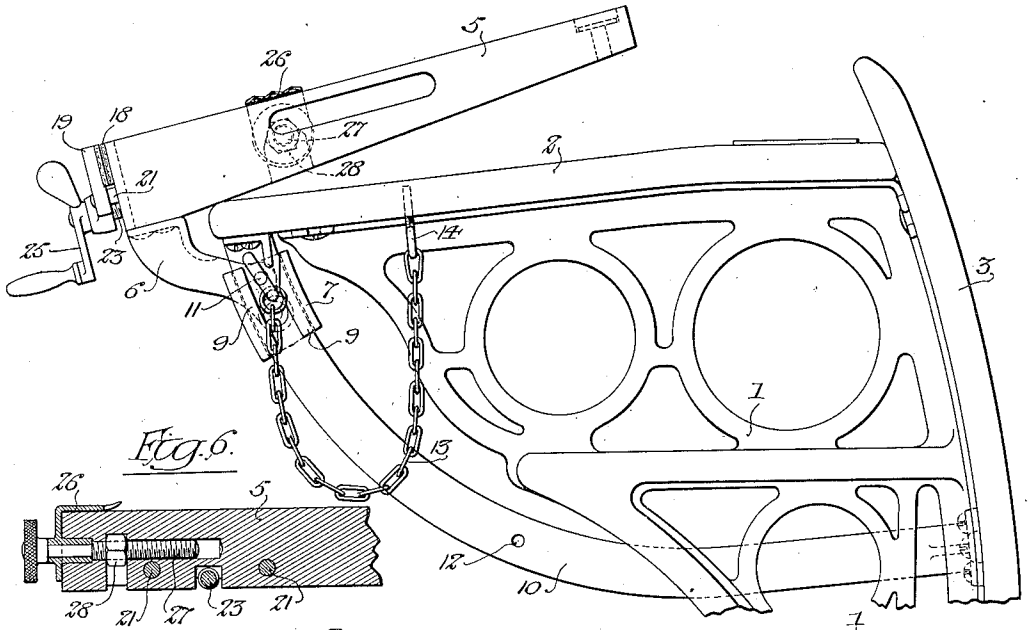
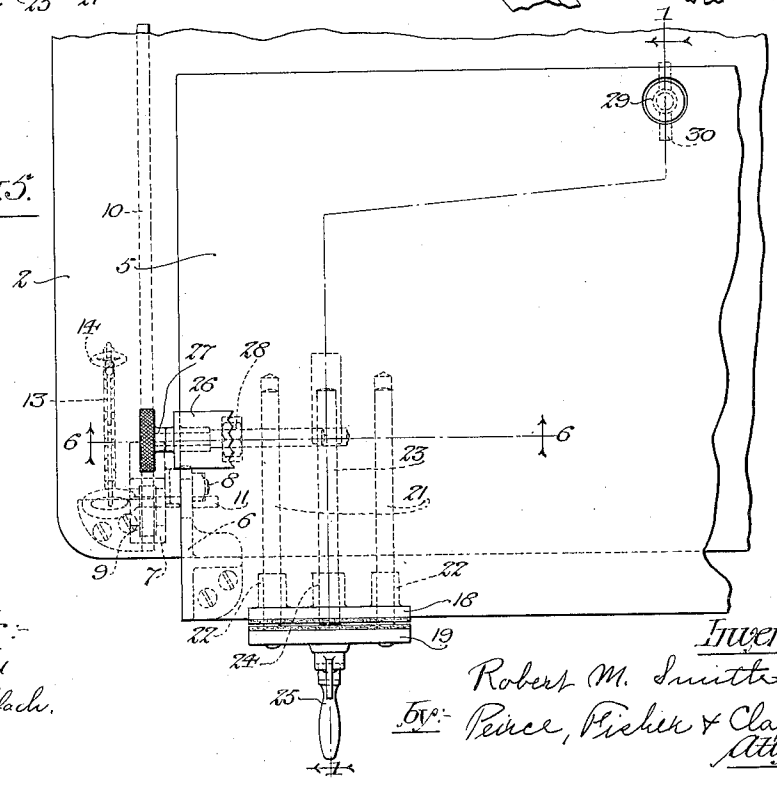


Fig. 6.

Fig. 5.



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UNITED STATES PATENT OFFICE.

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SCHOOL-DESK.

1,092,180. Specification of Letters Patent. Patented Apr. 7, 1914.

Application filed February 15, 1913. Serial No. 748,758.

To all whom it may concern:

Be it known that I, ROBERT M. SMITH, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented new and useful Improvements in School-Desks, of which the following is a full, clear, and exact description.

The invention relates to school desks or attachments therefor, and seeks to provide the usual school desk with a supplemental work top which can be placed in position above the desk top for use in manual training classes, or shifted to inoperative position, out of the way, so that it will not interfere with the ordinary use of the desk.

The invention consists in the features of improvements hereinafter set forth, illustrated in the preferred form in the accompanying drawings, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a vertical section of the upper portion of a school desk with the supplemental top in operative position and parts shown in section on line 1—1 of Fig. 5. Fig. 2 is a vertical, central section with the supplemental top in inoperative position. Fig. 3 is a front elevation of portions of the supplemental and fixed desk tops. Fig. 4 is a side elevation with the supplemental top held in inclined position for use as a drawing board. Fig. 5 is a partial plan view of the fixed and supplemental desk tops. Fig. 6 is a detail section on the line 6—6 of Fig. 5.

In its preferred form, the invention is adapted to be applied to school desks of usual construction. The upper portion of such a desk is shown in the drawings, and it comprises cast metal side frames 1, an inclined top portion 2 fixed to the upper edges of the supporting side frames, a back portion 3 fixed to the rear edges of said side frames and a book shelf 4 secured to the side frames below the top 2. The top 2, back 3 and shelf 4 are usually formed of wood.

The supplemental work top or board 5 is formed of wood and is thicker at its outer front edge than it is at its inner rear edge; that is to say, the supplemental work top is provided with an inclined bottom face to fit upon the inclined, fixed desk top 2 and a substantially horizontal upper face. In the operative position of the supplemental work top, its forward edge projects slightly beyond the forward edge of the fixed desk top. A pair of brackets 6 are firmly secured to the under side of this forwardly projecting edge portion of the desk top and at points adjacent the side edges thereof. These brackets are preferably slightly curved, as shown, so that, when the work top is in operative position, they will extend downwardly and forwardly beneath the front edge of the desk top 2 and pivotally engage a pair of slides 7. In the construction shown, the brackets are connected to the inner faces of the slides 7 by pivot bolts 8, and the latter is provided at its side edges with L-shaped flanges 9 which engage the edges and overlap the outer faces of a pair of flat guide rods 10. The guide rods are fixed at their upper, forward ends to the front edge portion of the desk top 2. Thence, the guide rods extend downwardly and rearwardly beneath the book shelf 4, and are secured at their rear ends to the back 3 of the desk. The work top may thus be shifted from its operative position, shown in Fig. 1, to inoperative position, shown in Fig. 2, below the book shelf 4. In this position the work top is out of the way and will not interfere with the ordinary use of the desk.

Means are provided for holding the work top in its inoperative position, and this is preferably effected by a pair of pins 11 that extend through openings 12 in the guide rods 10 and engage and support the supplemental work top, as shown in Fig. 2. To prevent the loss of the pins 11, they are preferably fixed to the ends of chains 13, the opposite ends of which are secured to the desk top by eyes 14. These same pins may be employed for holding the work top in operative position. For this purpose the guide rods 10 are provided at their upper, forward portions with holes 15, the slides 7 are provided with holes 16 and the brackets are provided with holes 17. When the desk is in the position shown in Fig. 1, these holes are in alinement and the locking pins 11 may be inserted therethrough to hold the parts against movement. Preferably, each of the brackets 6 is provided with one or more additional holes 17′ so that by withdrawing the pins from the brackets, the work top can be shifted to and locked in

inclined position, as shown in Fig. 4, and thereby conveniently used as a drawing board.

The improved work top is provided at its outer, thicker edge with a small vise comprising inner and outer jaws 18 and 19. The inner jaw is fixed to the front edge portion of the supplemental work top by screws 20. The outer jaw is provided with guide pins 21 (see Fig. 5), which extend through guides 22 on the inner jaw and through openings formed in the body of the work top. A screw 23 is threaded through a portion 24 of the inner jaw and is rotatably connected to the outer jaw. At its outer end the screw is provided with a handle 25. At its left-hand edge the work top is also provided with an angular metal stop 26 which is held in place by a screw 27 extending through an opening in the work top and also through a nut 28 located in a recess therein. To securely clamp the work top in position and prevent its movement, when strain is brought upon work in the vise at its outer edge, the inner edge portion is preferably clamped to the desk top by means of a screw 29 extending through the supplemental top and desk top and having a wing nut 30 on its lower end.

The improvement thus provides the equipment of an ordinary work bench for manual training purposes, all of which can be shifted out of the way so as not to interfere with the ordinary use of the desk. In its preferred form as stated, the invention can be applied to ordinary desks now in use.

It is obvious that changes may be made from the details set forth without departure from the essentials of the invention as defined in the claims.

I claim as my invention:—

1. A school desk having a fixed top, a supplemental work top, slides to which said supplemental work top is pivoted, guides whereon said slides are shiftable to permit the movement of said supplemental work top from an operative position upon said fixed top to an inoperative position entirely below said fixed top to afford access to the latter, and means for sustaining said supplemental work top in its inoperative position entirely below said fixed top.

2. A school desk having a fixed top, a supplemental work top, and guides for said supplemental work top extending downwardly and forwardly from the front edge of said fixed top and whereon said supplemental work top is shiftable to operative position upon said fixed top and to inoperative position below the same.

3. A school desk having a fixed top, a shiftable work top, brackets fixed to the forward edge of said work top, slides whereon said brackets are pivoted, said desk having guides for said slides whereby said work top may be shifted into and out of operative position and above and below said fixed top, and locking devices coöperating with said slides and brackets for securing said work top in its operative position and in its inoperative position below said fixed top.

4. A school desk having a fixed top, supporting side frames and a back portion, curved guide rods extending downwardly and rearwardly from the front edge of said top to said back portion, slides mounted on said guide rods, brackets pivoted on said slides, and a supplemental work top fixed at its forward edge to said brackets and movable into and out of operative position on said fixed top.

5. A school desk having a fixed top, supporting side frames and a back portion, curved guide rods extending downwardly and rearwardly from the front edge of said top to said back portion, slides mounted on said guide rods, brackets pivoted on said slides, a supplemental work top fixed at its outer edge to said brackets and movable therewith into and out of operative position above said work top and means for holding said guides and brackets against movement on said guide rods, to thereby secure said work top in position on said fixed top.

6. A school desk having a fixed top, supporting side frames and a back portion, curved guide rods extending downwardly and rearwardly from the front edge of said top to said back portion, slides mounted on said guide rods, brackets pivoted on said slides, a supplemental work top fixed at its outer edge to said brackets and movable therewith into and out of operative position with said work top, and locking pins arranged to hold said slides and brackets against movement on said guide rods to thereby secure said work top in position on said fixed top, said pins being arranged to coöperate with said guide rods to hold said work top in its inoperative position below said fixed top.

7. A school desk having a fixed top, a shelf below the same, a supplemental work top, and guiding means whereby said work top is directed upwardly to operative position upon said fixed top and downwardly and forwardly to an inoperative position below said shelf.

8. A school desk having a fixed top, a shelf below the same, a supplemental work top, slides to which said supplemental top is pivotally connected at its forward edge, guides for said slides extending downwardly from the front edge of said fixed top and forwardly below said shelf whereby said work top may be shifted to operative position upon said fixed top and to inoperative position below said shelf, and means for sustaining said supplemental top in its operative position.

9. A school desk provided with a fixed top, a shiftable work top, and brackets connected to said shiftable work top, said desk having guides and said brackets having combined pivotal and slidable connections with said guides, said brackets and guides coöperating to direct the movement of said work top downwardly and forwardly from operative position upon said work top to an inoperative position entirely below the same, substantially as described.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."