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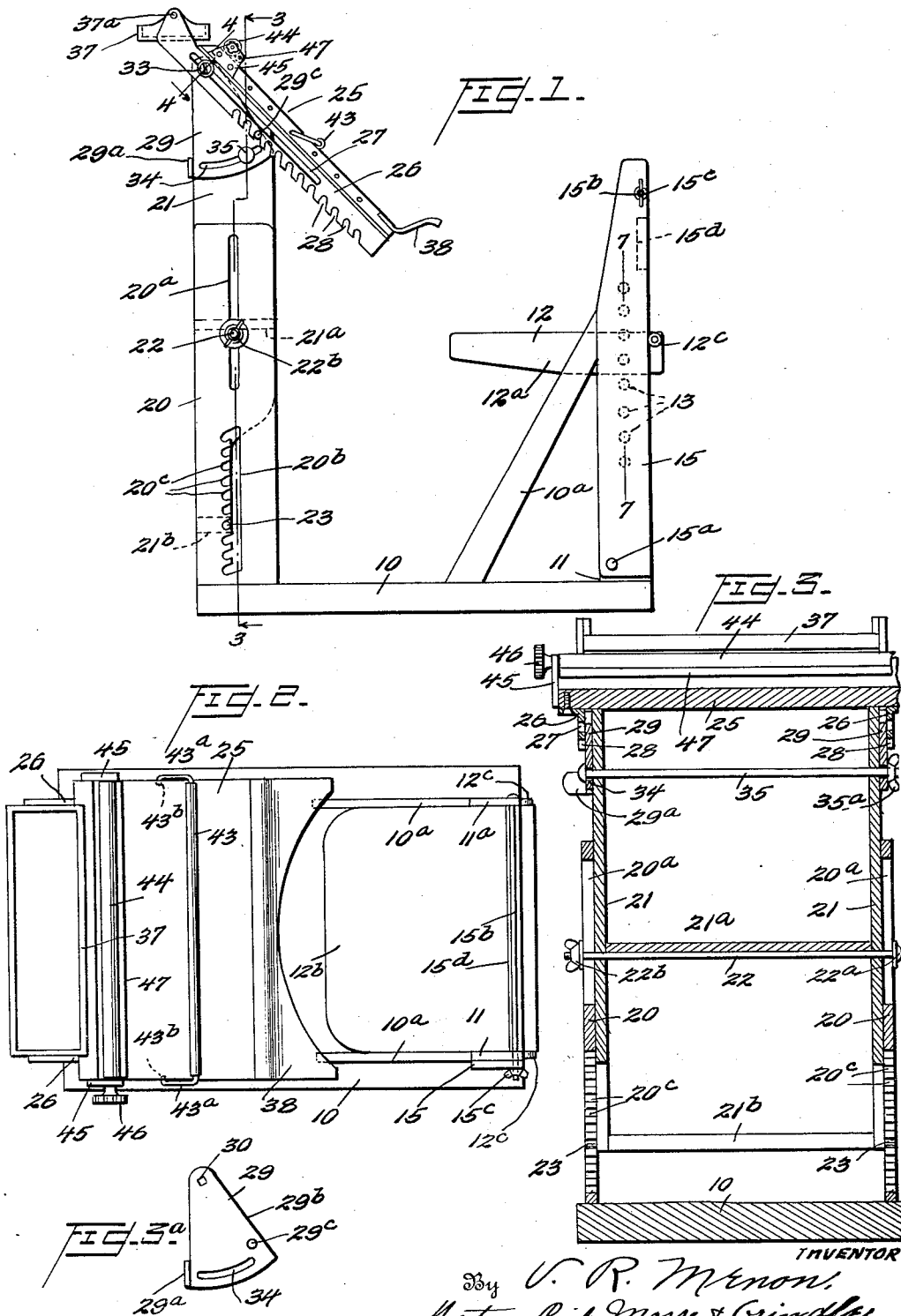
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ADJUSTABLE DESK AND SEAT ARRANGEMENT

Filed Dec. 27, 1928

2 Sheets-Sheet 1



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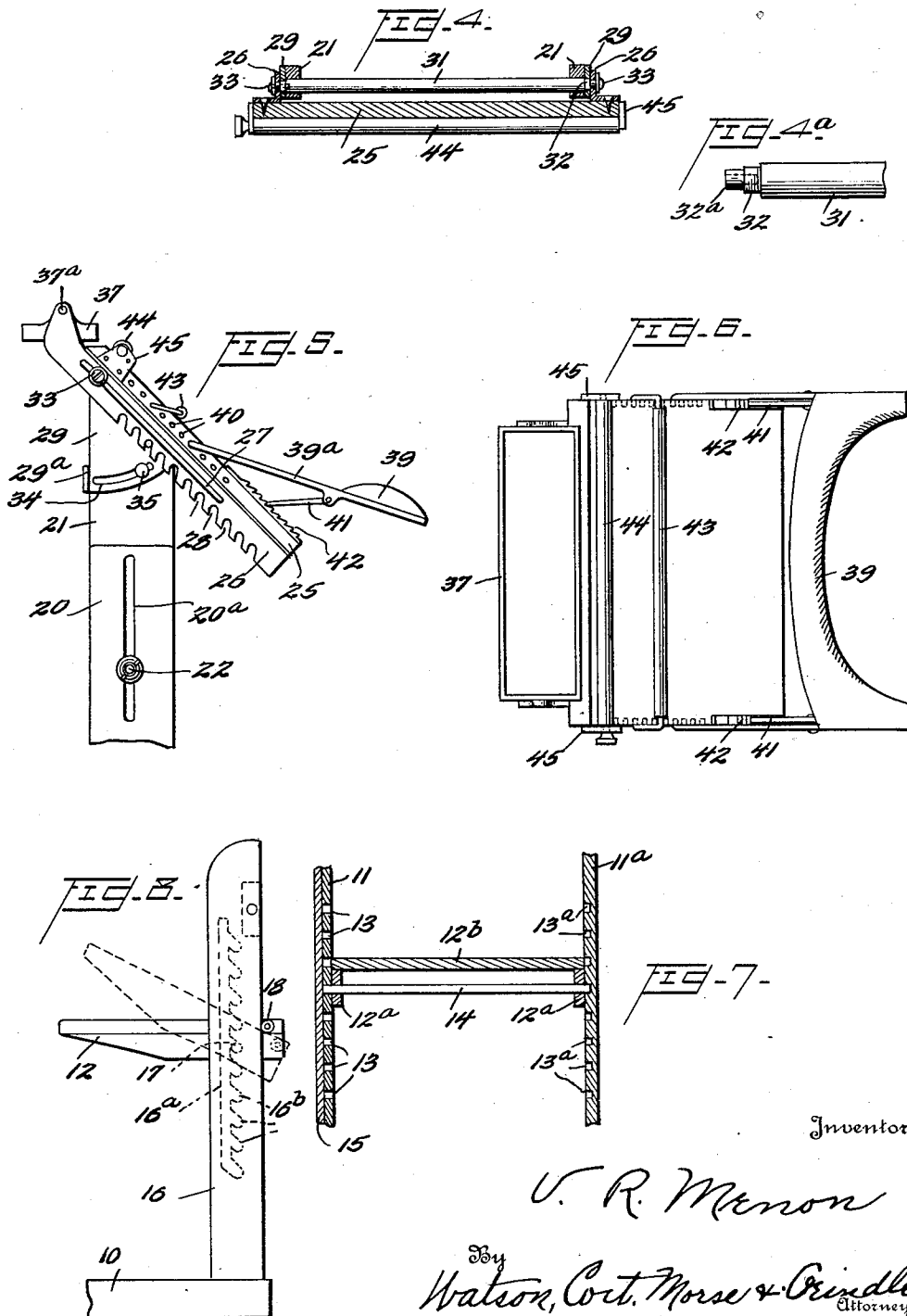
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ADJUSTABLE DESK AND SEAT ARRANGEMENT

Application filed December 27, 1928. Serial No. 328,800.

This application is a continuation in part of my copending application Serial No. 228,903, filed October 26, 1927, and in part involves certain improvements over the construction disclosed in said prior application.

As pointed out in my prior application, in using a desk for reading, writing or other work, it is highly desirable to have the upper surface of the work support or table inclined or tilted toward the user so as to bring it into a plane as nearly as possible at right angles to the line of vision and to have such work support adjustable so that the eyes of the user can be correctly focused on the work and the user caused to assume an upright posture either sitting or standing. To this end the present invention involves an arrangement embodying a desk having a vertically adjustable work table and a vertically adjustable seat so that both may be adjusted to suit persons of different heights and to accommodate the user in either a sitting or standing posture. A further object is to provide a desk having a work table which may be adjusted to any desired inclination and which is slidably adjustable laterally toward and from a person occupying the seat. A still further object is to provide the inclined work table or desk with an adjustable book-rest or paper holder which may be placed at any desired position on the upper surface of the work table. A still further object is to provide the work table with a pivoted holder or tray for receiving an inkwell, pen, pencils or other materials. A further object is to provide a desk of the kind in question in which the work table is provided adjacent its upper edge with a roller by which paper may be held in any desired position and fed downwardly over the upper surface of the work table by manually rotating such roller.

The invention is illustrated in the accompanying drawings forming a part hereof, it being understood that modifications may be resorted to within the scope of the appended claims.

In said drawings:

Figure 1 is a vertical side elevation of the combined desk and seat;

Figure 2 is a plan view of the same;

Figure 3 is a vertical section on the line 3—3 of Fig. 1;

Figure 3a is a detail view of one of the members for adjusting the work table to vary the inclination thereof;

Figure 4 is a vertical section on the line 4—4 of Fig. 1;

Figure 4a is an enlarged detail of the end of the pivot rod for the work table;

Figure 5 is a side elevation of the upper portion of the desk showing a slightly modified arrangement of arm rest;

Figure 6 is a plan view of the arrangement shown in Fig. 5;

Figure 7 is a vertical section on the line 7—7 of Fig. 1; and

Figure 8 is a vertical side elevation of a modified arrangement of adjustable seat.

Referring to the drawings in detail by the reference characters thereon, 10 indicates a base which is adapted to support a seat and a desk arranged in convenient relation to each other. The seat, as shown in Figs. 1, 2 and 7, is made up of standards 11, 11a, which are rigidly secured on the base 10 and each of which is provided with a brace 10a secured thereto and to the base 10. Between the standards 11, 11a is arranged the seat proper, indicated at 12, and which comprises side pieces or rails 12a upon which a flat or suitably shaped seat member 12b is secured. The standard 11 is provided with a vertically arranged series of holes 13 and the inner surface of the opposite standard 13a on the opposite side is provided with a series of corresponding depressions 13a. The seat proper is supported in any desired position on the standards 11, 11a, by means of a bar 14 which may be inserted through any one of the holes 13 in the standard 11 and through the rails 12a of the seat and into one of the depressions 13a on the opposite standard. At its rear end the seat is provided with lateral projections or lugs 12c which are adapted to contact with the rear edges of the standards 11, 11a, to hold the seat member 12b in substantially horizontal position, such projections being formed either on the side pieces 12a or on the rear edge of the seat member 12b. The seat 12 may be adjusted to any desired height by in-

serting the bar 14 in any one of the holes 13 and depressions 13a. To prevent withdrawal of the bar 14, I provide a cover plate 15 pivoted at 15a to the standard 11 and which normally rests against this standard and is secured thereto by means of a bolt 15b which extends transversely between the standards 11, 11a, the cover plate 15 being notched to fit over this bolt and the bolt having on its end a clamping nut 15c. When it is desired to withdraw the bar 14 to change the position of the seat 12, it is only necessary to loosen the clamping nut 15c and turn the cover plate 15 down about its pivot point 15a. The seat is provided with any suitable backrest, indicated at 15b, which is arranged between and rigidly secured to the standards 11, 11a.

In the seat arrangement shown in Figure 8, each of the standards indicated at 16 is grooved on its inner surface at 16a, and extending rearwardly and downwardly from these grooves are shallow notches 16b. In this arrangement the side pieces of the seat 12 are each provided with a laterally projecting pin or lug 17, which pins are adapted to slide vertically in the grooves 16a and rest in the notches 16b. In this form also the seat adjacent its rear end is provided with laterally projecting pins or lugs 18 which are adapted to contact with the rear edges of the standard 16 to hold the seat in substantially horizontal position. When it is desired to change the level of the seat in this arrangement, it is only necessary to tip the same up in the position shown in dotted lines in Figure 8, when the pins 17 may be withdrawn from the notches 16b and the seat moved up or down as desired.

The desk portion of my construction includes vertical members or standards 20 also rigidly secured to the base 10 and each of which is provided with an upper slot 20a and a lower slot 20b. Extending downwardly and rearwardly from the slot 20b is a plurality of notches 20c for a purpose hereinafter described. Arranged against the inner surface of each of the standards 20 is an upright support 21 between which is arranged an upper cross bar 21a and a lower cross bar 21b, which are rigidly secured to the supports 21. The upright supports 21 and cross bars together form a rigid vertically slidable support for the work table later described. A rod 22 extends transversely through the supports 21 beneath the bar 21a and through the slots 20a of the standards 20. On one end this bar is provided with a head 22a and on the other end with a clamping nut 22b. On the lower end of one or both of the supports 21 is secured a laterally projecting pin or lug 23 and these pins are adapted to rest in any desired one of the notches 20c above mentioned.

By the foregoing arrangement it is evi-

dent that by loosening the nut 22b, the supports 21 and the parts carried thereby may be raised or lowered, as desired, the pins 23 being withdrawn from the notches 20c during such raising or lowering operation. Also after the desired adjustment is secured, the pins 23 may be caused to enter the proper notches 20c and the nut 22b can be again tightened to secure the parts rigidly together.

The upper ends of the supports 21 are inclined toward the seat 12 and mounted on these supports is a work table 25 which is adapted to support paper or books or any other work in convenient position for a person occupying the seat 12. In view of the vertical adjustability of the supports 21 relative to the standards 20, as heretofore described, it is evident that the work table 25 may be bodily adjusted up and down relative to the base 10 and to the seat 12 to accommodate persons of different heights. Also the work table may be adjusted upwardly to such an extent as to accommodate a person in a standing position.

The work table 25 is arranged to rest in an inclined position on top of the supports 21, or of desired the degree of inclination may be varied. Also this table is preferably made so that it can be adjusted laterally relative to the supports 21, in other words, the work table is free from attachment to the supports and is laterally slidable relative to such supports. These results are accomplished by the following arrangement: An angle bar 26 is secured along each edge of the work table, one leg of each of said bars being rigidly secured to the under surface of the work table and the other leg extending downwardly therefrom. Each of the downwardly extending legs of the bars 26 is provided with a longitudinal slot 27 and the lower edge of each is provided with a series of notches indicated at 28. Arranged between each of the angle bars 26 and the adjacent face of the supports 21 is an adjusting member 29, each of which at its upper end is provided with a square hole 30. A rod or shaft 31 extends transversely through the upper ends of each of the supports 21 and is rotatable therein. At each end the rod or shaft 31 is provided with a squared portion 32 which tightly fits in the squared openings 30 above mentioned in the adjusting members 29. The extreme end portions on the rod or shaft 31 are preferably round, as indicated at 32a, which portions extend through the slots 27 in the downwardly extending legs of the angle bars 26. A screw 33 is inserted in each end of the rod or shaft 31 to hold the parts in assembled relation. Adjacent their lower ends, each of the adjusting members 29 is provided with a slot 34 and a rod 35 extends transversely through the standards 21 with its opposite ends arranged in said slot, one end of this rod, preferably the right hand end,

being provided with a clamping nut 35a. One of the adjusting members 29, preferably the left hand one, is provided with a handle 29a.

It will be understood that the work table 25 is adapted to normally rest upon the inclined upper ends of the supports 21 or upon the upper edges 29b of the members 29. Also it will be apparent from the foregoing description that the work table 25, along with the angle bars 26, is capable of sliding motion relative to the adjusting members 29. In order to secure the work table in any desired position relative to the adjusting members 29, the latter are provided with laterally extending pins 29c which are adapted to enter any one of the notches 28 formed in the lower part of said angle members. It will further be understood from the foregoing that by moving the adjusting members around their pivotal support, that is, around the axis of the rod or shaft 31, the inclination of the work table 25 can be varied as desired. That is, by loosening the nut 35a on the rod 35 and grasping the handle 29a on the adjusting member 29, this member and the corresponding one may be simultaneously rotated upwardly to the same extent, and after the same have been rotated to bring the table to the desired inclination, the clamping nut 35a may be tightened to secure the parts in the desired position of adjustment.

Preferably the upper ends of the angle bars 26 are extended somewhat beyond the work table 25 and between such extending ends I provide a tray 37 for receiving pens, pencils or other material, this tray being pivoted at 37a so that the same remains substantially horizontal even when the inclination of the work table is changed.

At its lower edge the work table, as shown in Figure 1, is provided with an arm rest 38 which extends upwardly and rearwardly in such a position as to conveniently support the arms of a person using the surface of the work table. As shown particularly in Figure 2, this arm rest is preferably curved so as to fit around the body of a person occupying the seat 12. In the form shown in Figure 1, the arm rest 38 is secured to the work table. If desired, this arm rest may be made adjustable as indicated in Figure 5, in which the body portion 39 of the arm rest has secured thereto side bars 39a, the ends of which are turned inwardly to engage any one of a series of depressions 40 arranged along the edge of the work table 25. Also in this arrangement the arm rest is provided with pivoted brace members 41 which are adapted to engage in any one of a series of notches formed in notched members 42 secured at each side to the upper surface of the work table 25. In this form the arm rest is also preferably formed with a curvature at its rear edge to fit around the body of the user.

In order to properly hold papers or books

on the upper surface of the work table 25, I provide a work rest, indicated at 43. This work rest comprises a central portion which is adapted to contact with the upper surface of the work table and which may be covered with rubber or wood or any other suitable material. At its ends the work rest 43 is provided with extensions 43a, the extreme ends of which are bent inwardly as indicated at 43b, and are adapted to be inserted in any one of the openings 40 formed in the edges of the work table. In other words, the work rest 43 may be adjusted to any desired position on the work table.

In using a construction of this kind, I have found it very convenient to have some means for holding paper on the table and feeding the same downwardly thereover. In order to effect this result, I arrange a roller 44 adjacent the upper edge of the table which extends transversely thereof and the ends of which are mounted in brackets 45 secured to the edge of the work table, the end of the roller being provided with a handle 46 for rotating the same. If desired, a supplemental roller 47 may be provided and geared to the roller 44.

The arrangement described is of particular applicability to school use, although, of course, not limited to that purpose. The seat 12 may easily be adjusted to accommodate persons of different heights and the desk can also be bodily adjusted up and down relative to the seat, its inclination can be readily changed and it may be slid up and down relative to its supports so as to bring it into convenient position for a person of any size occupying the seat 12 or in position to be used by a person of any size when in a standing posture.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A desk construction comprising a base, standards mounted on said base, each of said standards having a vertical slot therein, a work table, supports on which said table is mounted, said supports extending downwardly between said standards, said supports at their lower ends having laterally extending projections and said standards having a series of notches adapted to be engaged by said projections, a rod extending through said supports and the slots in said standards and having a clamping nut on one end, whereby said supports may be clamped to said standards with said projections resting in any desired one of said notches.

2. A desk having a work table and a support on which said table is pivotally and slidably mounted, a member pivotally connected to said support and arranged beneath said table and positioned to contact with and hold said table in any desired position of pivotal adjustment, said table being rotatable and

movable laterally relative to said support and said member, a notched bar carried by said table and a projection on said member adapted to be engaged in any desired one of
5 said notches by sliding said table relative to its support and means for securing said member in any desired position of pivotal adjustment.

3. A construction of the kind described
10 comprising a pair of supports, a table pivotally and slidably mounted on said supports, a member arranged beneath said table and pivotally connected to one of said supports and arranged to hold said table in any desired
15 position of adjustment, said table being rotatable and movable laterally relative to said support and said member, means for clamping said member in any desired position of pivotal adjustment, whereby said table is held
20 at any desired inclination, a lug carried by said member and a notched bar secured to said table whereby any one of said notches may be engaged over said lug to hold said table in any desired position of slidable adjustment
25 relative to said supports.

In testimony whereof I hereunto affix my signature.

VADAKKATH RAMUNNI MENON.

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