

M. A. WERTHEIMER.
ADJUSTABLE DESK.

No. 517,633.

Patented Apr. 3, 1894.

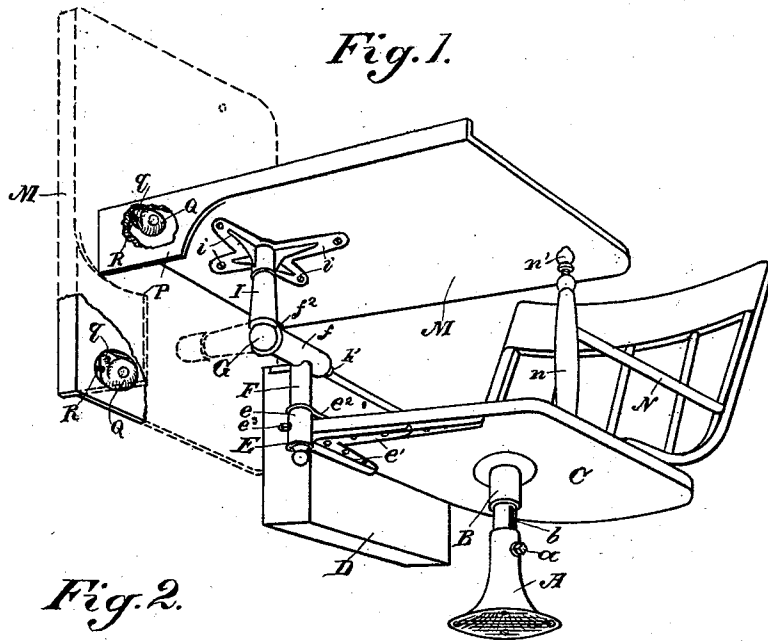


Fig. 2.

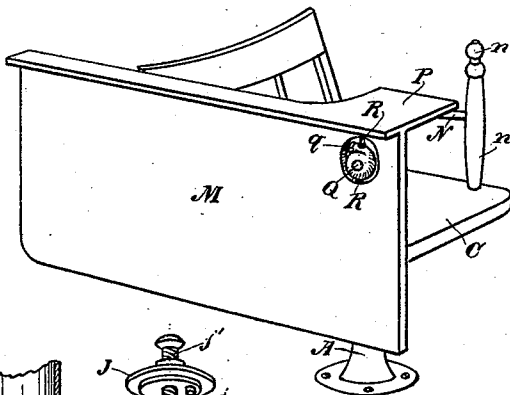


Fig. 4.

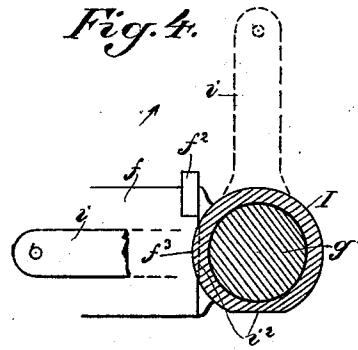


Fig. 3.

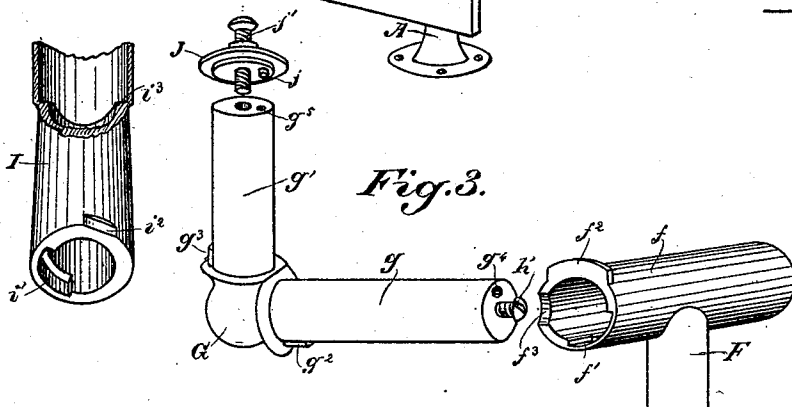


Fig. 5.

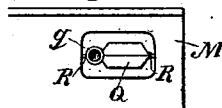
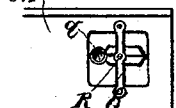


Fig. 6.



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(No Model.)

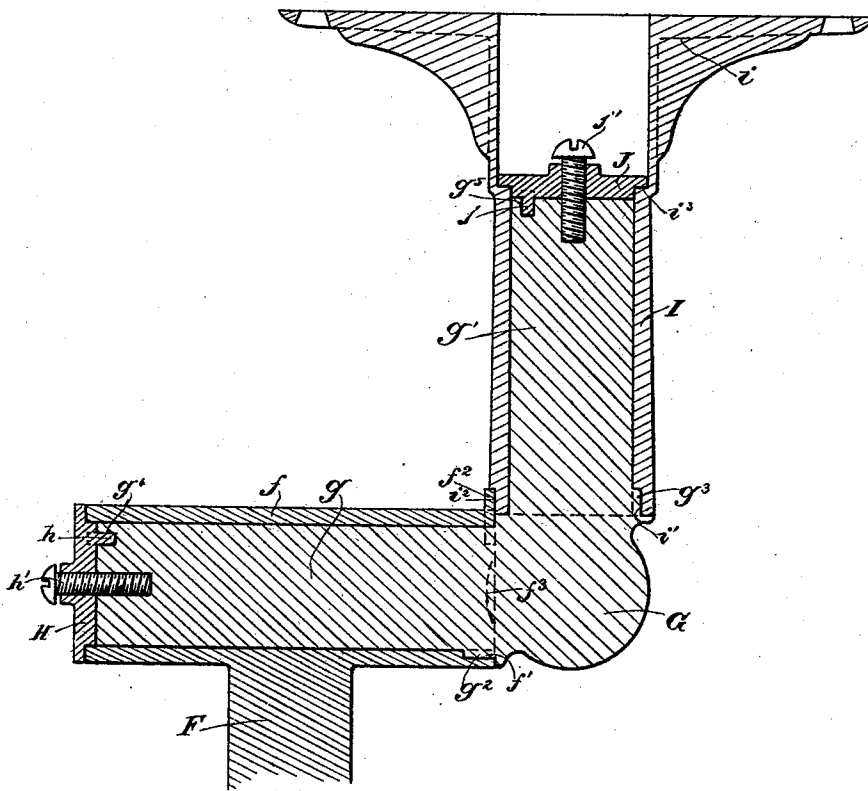
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Fig. 7.



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UNITED STATES PATENT OFFICE.

MONROE A. WERTHEIMER, OF SAN DIEGO, ASSIGNOR OF TWO-THIRDS TO CHARLES E. BANCROFT AND HARLOW P. BANCROFT, OF SAN FRANCISCO, CALIFORNIA.

ADJUSTABLE DESK.

SPECIFICATION forming part of Letters Patent No. 517,633, dated April 3, 1894.

Application filed May 9, 1893. Serial No. 473,541. (No model.)

To all whom it may concern:

Be it known that I, MONROE A. WERTHEIMER, a citizen of the United States, residing at San Diego, San Diego county, State of California, have invented an Improvement in Adjustable Desks; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of desks, in which the leaf or table is so connected with the chair or seat portion as to have a movement from a horizontal plane in front of the user, to a vertical position, and thence edgewise in a perpendicular plane to a position of rest beside the chair.

My invention consists in the novel constructions, combinations and arrangements of the several parts, by which the table or leaf is adapted to have its movements and by which it is regulated therein, and in minor details, including the ink well, all of which I shall hereinafter fully describe and specifically claim.

The object of my invention is to provide simple and effective means for mounting the table or leaf and adapting it to have its several movements, being accurately limited therein and supported in each position with the maximum stability, whereby convenience and efficiency are obtained, especially adapting the desk for use as a school desk, though it is also applicable for any use in which is required or may be found desirable a leaf which is adapted to be turned to a position for use, and when out of use to be turned fully out of the way.

A further object is to provide, in connection with said table or leaf, an ink well so constructed and mounted that it will not spill the ink during the several movements of the table or leaf.

Referring to the accompanying drawings for a more complete explanation of my invention—Figure 1 is a perspective view of my desk looking up under the table or leaf, the latter being shown in full lines in its first position and in dotted lines in its second position. Fig. 2 is a view showing the leaf in its third or final position. Fig. 3 is a view

showing the separate details of the several hinge joints. Fig. 4 is a view showing the engagement of parts when the table or leaf is in the position of Fig. 2. Figs. 5 and 6 show different mountings of the ink well. Fig. 7 is a vertical section showing the relationship of the sleeves and journal pins, and the stops and recesses controlling them.

A is a base or leg of suitable character, within the hollow stem of which is supported the standard B, which latter is vertically adjustable by means of a slot *b* made in it fitting over a set bolt *a* in the base.

To the top of the standard is firmly secured the seat or chair C which may have secured to one side of it the box D for books and other articles.

E is a bracket having a socket *e*, arms *e'* and a top projecting lip *e*². This bracket is secured to the chair seat by means of its arms fitting under and screwed to said seat, while its top lip *e*² projects over and fits down on top of the seat and is screwed thereto. The socket *e* is thus located at the right-hand front corner of the chair seat and the bracket being thus secured to said seat is held firmly in place, and serves the additional function of strengthening the seat. Its top lip *e*² is of advantage in firmly and rigidly holding the bracket to place.

Mounted within the socket *e* and adapted to be vertically adjusted therein, is a standard F which is set by a screw *e*³ in any vertical position desired. The top of this standard F is provided with a cross sleeve *f*, within the forward end of which is made a recess or groove *f'*. This forward end has also a straight faced bearing flange *f*², and a grooved out or notched portion *f*³ directly in its edge.

G is a casting or other piece which is provided with a journal pin *g*, and a second journal pin *g'*, the two being at an angle to each other. This angle may be such as will provide for the proper position of the table or leaf hereinafter described: it is here shown as a right angle. Upon the journal pin *g* is a stop lug *g*², and upon the journal pin *g'* is a stop lug *g*³. The journal pin *g* fits within the sleeve *f* and is adapted to have an axially ro-

tary motion therein, said motion being limited by its stop lug g^2 , playing in the recess f' of the sleeve, said recess and stop being so located as to permit the journal pin to have a rotation which, for present purposes, is a quarter one, adapting the vertical journal pin g' to turn from a perpendicular to a horizontal position and back again, and to be accurately limited at the extremities of this movement. Fitted to the rear end of the journal pin g is a washer H which has upon it a lug h engaging a socket g^4 in the rear end of the journal pin, whereby said washer is adapted to turn with the pin. The washer bears against the rear end of the sleeve f and is adapted to be set tightly up thereto by means of a binding screw h' . By properly setting up this screw the journal pin g is adapted to turn in the socket or sleeve with any desired amount of friction due to the binding of the washer on the sleeve.

I is a supporting sleeve having top arms i . This sleeve has within its lower end a recess i' and on one side of its end it has a flattened portion i^2 . The sleeve I fits down over and is journaled upon the pin g' of the piece G , and is adapted to have a rotary motion thereon, being limited in this motion by the stop lug g^3 of said pin playing in its recess i' . This recess is of sufficient length to allow the sleeve I to turn through an arc, the length of which is, for present purposes, a quarter one. The movement of the sleeve I , as just described, is adapted to take place only when the journal pin g' is in a horizontal position. When it is in a vertical position the flattened portion i^2 on its base, bears squarely against the straight faced flange f^2 on the sleeve f , and this bearing serves as a stop to hold the sleeve I firmly when in a vertical position, and prevent it from turning at all, thus giving it stability. When the sleeve I is first turned to a horizontal position, however, the flattened portion will then be opposite the notched or grooved out edge f^3 of the sleeve f which will permit the sleeve to rise to a vertical position again. While in this horizontal position, the sleeve I may be turned through its quarter rotation freely, as its portion i^2 will then not be opposed by any stop.

The sleeve I is held to the journal pin g' by means of a washer J fitted by a lug j to a socket g^5 in the end of the journal pin, said washer being seated within the upper end of the sleeve, and bearing upon a flange i^3 therein whereby the washer is connected with the journal pin, and may be bound down with the required amount of friction to the sleeve by means of a screw j' so that the turning of the sleeve on its journal pin may be frictionally regulated.

M is the table or leaf. It is secured upon top of the arms i of the sleeve I . Assuming now that the table or leaf is in a horizontal position in front of the occupant of the chair, it is limited in this position by means of the stop lug g^2 of the journal pin g , and it is pre-

vented from having an oscillatory movement in a horizontal plane by means of the bearing of the portion i^2 against the flange f^2 of the sleeve f . Now, its first movement to get it out of the way of the occupant is bodily through an arc in a vertical plane, which movement is accomplished by the turning of the journal pin g in the sleeve f through a quarter turn, which thereby throws the journal pin g' into a horizontal position so that the table or leaf will now be upright beside the chair. In this position it is again limited by the stop lug g^2 . Its next movement is through an arc in a vertical plane, turning edgewise backwardly down beside the chair, which movement is accomplished by the sleeve I turning on the journal pin g' . It is limited in this movement by the stop g^3 of said journal pin. In this final position it is wholly out of the way. It cannot be moved again directly to a horizontal position, because the full round portion of the end of sleeve I is opposite the groove or notch f^3 in the end of the sleeve f . Therefore, to return it, it must first be turned to an upright position forwardly, the sleeve I turning on the journal pin g' thereby presenting its flattened portion i^2 to the notch or groove f^3 . The sleeve I can now be turned to a vertical position carrying the table or leaf with it whereby the latter resumes its original or initial horizontal position. By the adjustment of the standard F , the table or leaf may be raised to the required height.

In order to furnish additional support for the free edge of the table or leaf, I have an arm rest N . This is connected with the outer side of the chair. It has an upright bar n , the lower end of which fits down in a socket in the chair, and its upper end is adapted to receive the table or leaf by fitting into a small socket on the under side. In order to accommodate the vertical adjustment of the table or leaf due to the setting of the standard F , the top of bar n of the arm rest N has a vertically adjustable extension n' which is set in proper position to support the table or leaf.

Upon one edge of the table or leaf is a small tablet P , which when the table or leaf is in a position out of the way is presented on top, and is for the purpose of enabling the user to make notes or memoranda without having to turn the table or leaf to its full horizontal position.

Q is the ink well, having a mouth q at one side. This is seated upon pivotal pins R in the table or leaf, said pins being in line with each other and preferably with the width of the leaf and the mouth q being toward the front edge thereof. Now, in the first movement of the table, from a horizontal to an upright position, the ink well, swinging upon its end pivots, turns from its initial position to a position approximately at right angles thereto and maintains its upright position, remaining in a state of equilibrium. Then when the table is turned backwardly edgewise, the ink well turns bodily with it, but

its body or reservoir portion being down and its mouth or neck being above, the ink will not spill out.

As shown in Figs. 5 and 6, the ink well may be turned at right angles to its former position, in which case it will turn bodily with the leaf on the first movement, and then remain in equilibrium on its pivots, on the second movement. In Fig. 5, the pivots remain the same as in Fig. 1, but in Fig. 6, the pivots are at the top and bottom, but the movements are substantially the same in both cases.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a desk in combination with the seat and the table or leaf, an adjustable connection between the two consisting of a horizontal sleeve connected with the seat, a vertical sleeve connected with the table or leaf, an intermediate piece having journal pins at right angles to each other, one of said pins being mounted in the sleeve connected with the seat, and the other being mounted in the sleeve connected with the table or leaf, stop pins on the journal pins and recesses in the sleeves engaging said pins for limiting the movements on and of said journal pins, substantially as herein described.

2. In a desk in combination with its seat and table or leaf, the means for adjustably connecting the two consisting of a horizontal sleeve connected with the seat, a vertical sleeve connected with the table or leaf, an intermediate piece having journal pins at an angle to each other, and each fitting in one of said sleeves whereby hinged joints are formed, and the means for frictionally controlling said joints consisting of the washers and bearing frictionally by means of binding screws on the sleeves, substantially as herein described.

3. In a desk, in combination with its seat and table or leaf, the means for adjustably connecting the two, consisting of a sleeve connected with the seat, said sleeve having a flange f^2 and recessed edge, a sleeve connected with the table or leaf having a flattened portion and recessed edge adapted to oppose the flange and recess of the other sleeve, and an intermediate piece having journal pins at an

angle to each other and each mounted in one of said sleeves, substantially as herein described.

4. In a desk, in combination with its seat and table or leaf, the means for adjustably connecting the two, consisting of a sleeve connected with the seat, said sleeve having a flange f^2 and recessed edge, a sleeve connected with the table or leaf having a flattened portion adapted to oppose the flange and recess of the other sleeve, a piece having journal pins at an angle to each other, and each mounted in one of said sleeves, and stop plugs and recesses in the sleeve with which they engage for limiting the movements of the pin and sleeve, substantially as herein described.

5. In a desk, the combination of the chair or seat, the table or leaf, a hinge connection at one side of the chair or seat and connecting the same with the table, said connection consisting of a sleeve carried by the seat and a sleeve carried by the table, one in a horizontal and the other in a vertical position, an intermediate piece having pins at right angles forming journals adapted to enter said sleeves whereby the table or leaf is adapted to be turned to a horizontal position in front of the chair and to a vertical position at one side thereof, and an arm rest at the opposite side of the chair having an adjustable extension in its upper end adapted to support the free end of the desk when the latter is in its horizontal position, substantially as herein described.

6. In combination with a table or leaf adapted to have a movement from a horizontal to an upright position and thence edgewise backwardly, an ink-well having a mouth at one side, and mounted in said table or leaf upon a pivot which enables it to automatically turn from its initial position to a position at right angles thereto when the table or leaf is turned from a horizontal to an upright position.

In witness whereof I have hereunto set my hand.

MONROE A. WERTHEIMER.

Witnesses:

EDW. G. LEWIS,
J. W. THOMS.