

May 13, 1924.

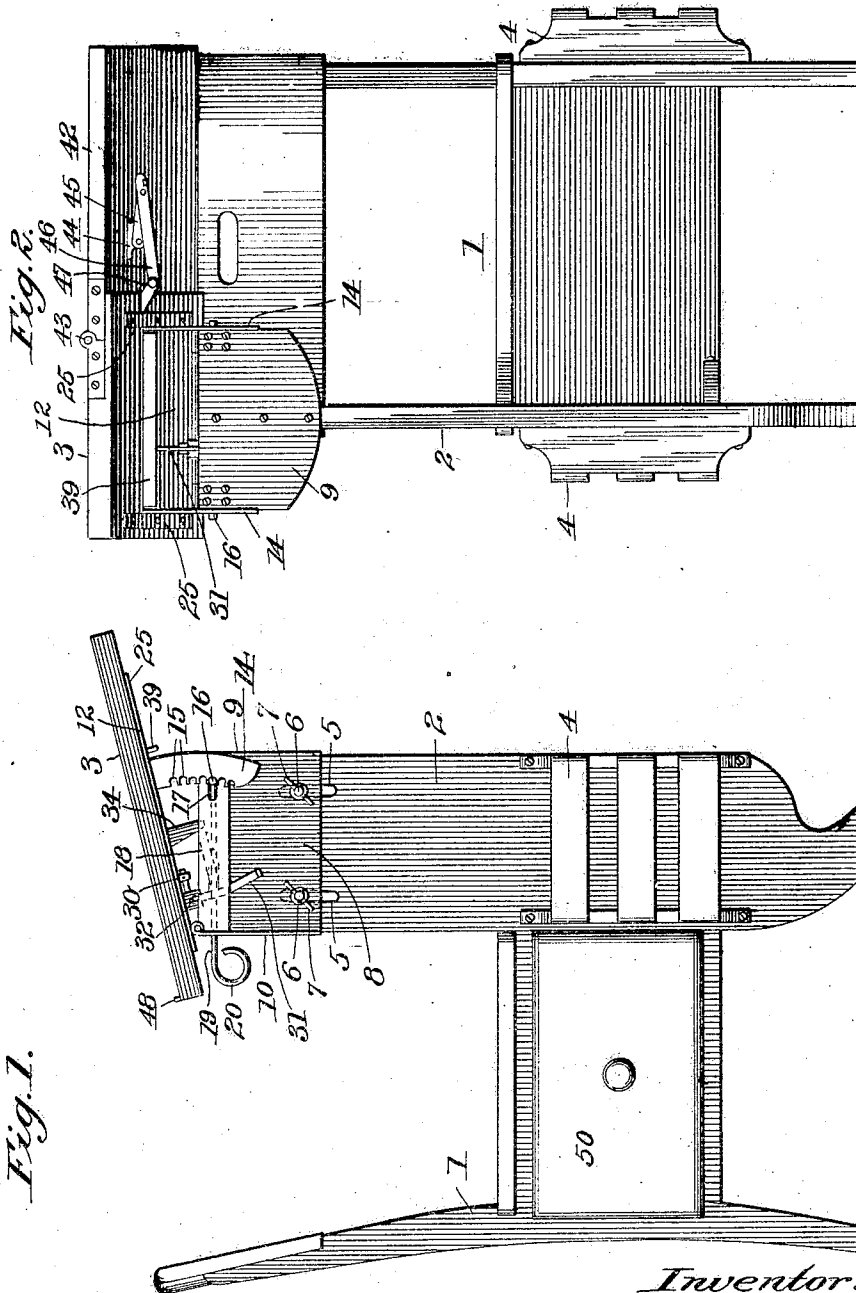
J. R. MOORE

1,493,891

COMBINATION DESK AND CHAIR

Filed Nov. 15, 1920

3 Sheets-Sheet 1



Inventor:
John R. Moore
By Louis C. Vanderlip.
Att'y.

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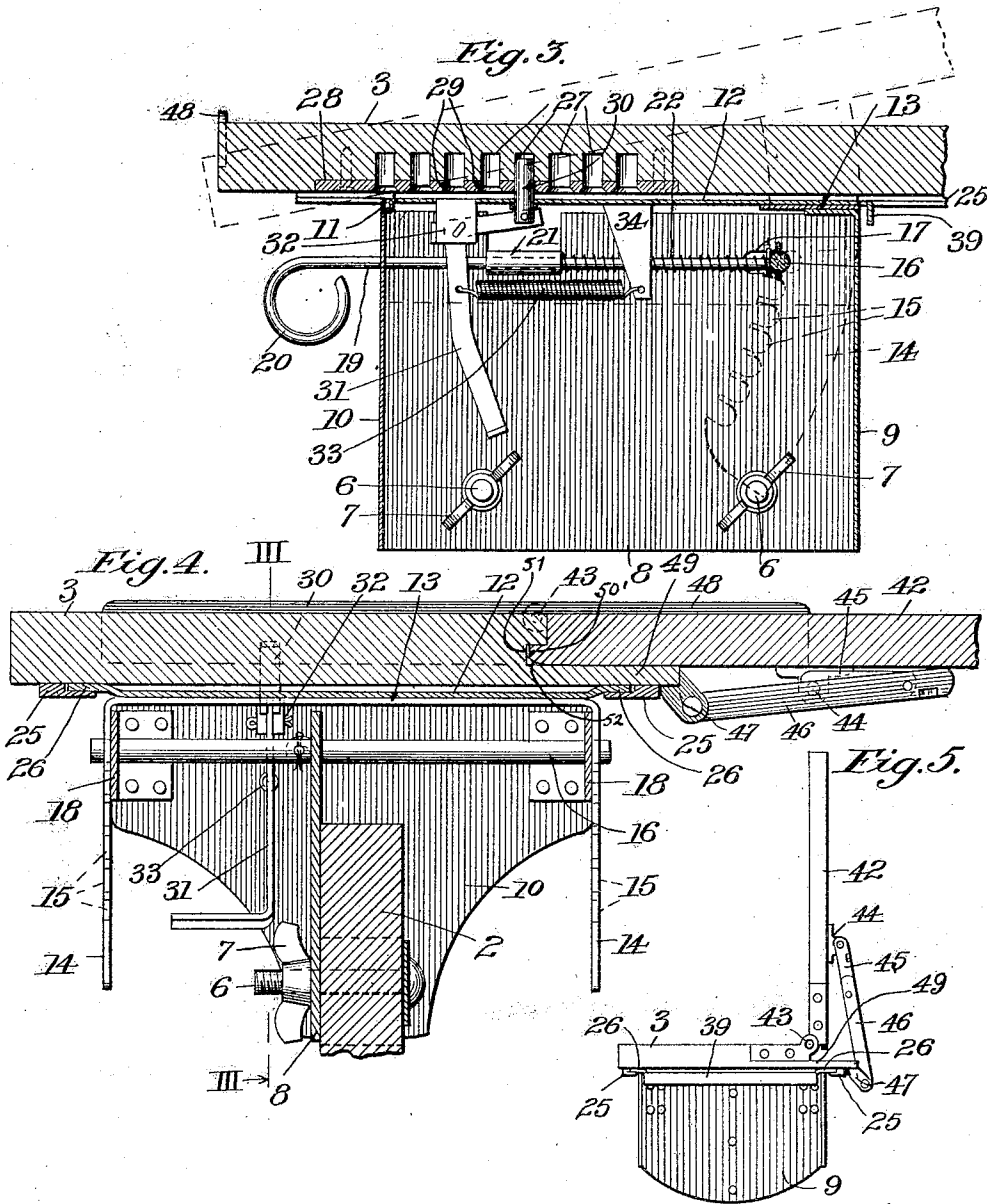
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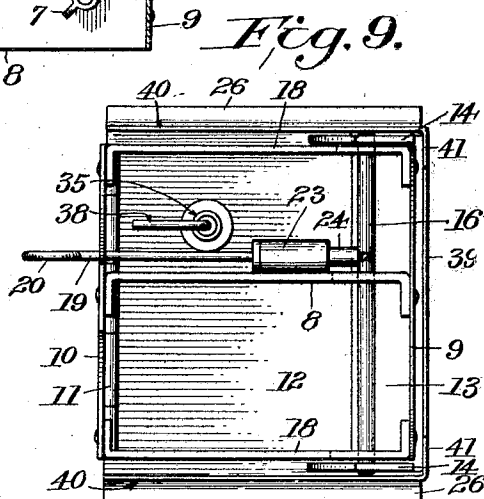
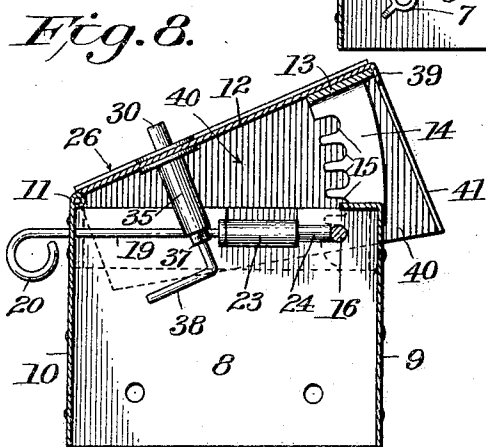
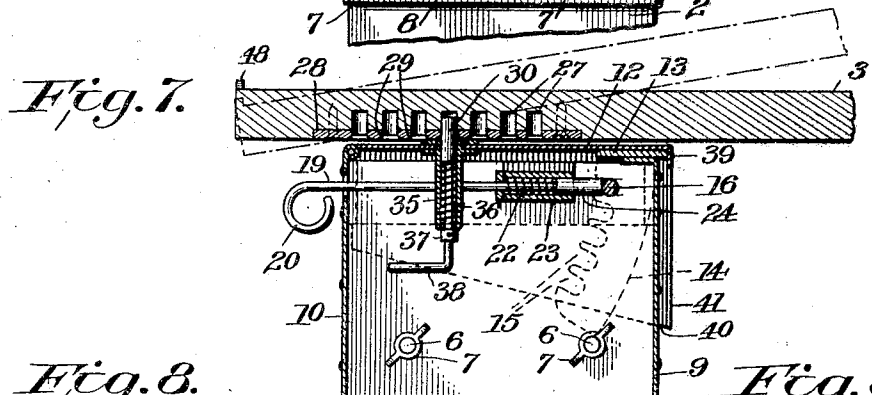
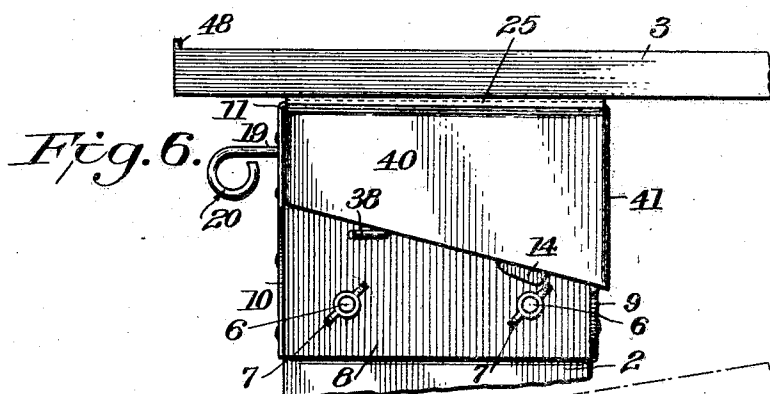
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UNITED STATES PATENT OFFICE.

JOHN R. MOORE, OF ELKHART, INDIANA.

COMBINATION DESK AND CHAIR.

Application filed November 15, 1920. Serial No. 424,317.

To all whom it may concern:

Be it known that I, JOHN R. MOORE, a citizen of the United States, residing in the city of Elkhart, county of Elkhart, and State of Indiana, have invented certain new and useful Improvements in a Combination Desk and Chair, of which the following is a specification.

This invention relates to combined desks and chairs, and has for its object to provide an improved construction of desk adapted to be adjustably attached to a chair for use in school or lecture rooms or elsewhere as may be desired.

Special objects are to provide improved means for adjusting the desk toward or away from the occupant of the chair, and also to different inclinations, said adjustments being made independently of each other, so that one adjustment may be rigidly maintained while the other is being made. The invention also contemplates the provision of separate and distinct means for retaining the desk in the two adjustments mentioned, so that there is no danger of one adjustment, as the inclination of said desk, for instance, being disturbed or displaced while the other adjustment toward or away from the user is being made, or vice versa. Thus, the desired adjustments of the desk may be more easily and conveniently effected than where both of said adjustments depend upon the same holding means, as in prior constructions of this type of furniture.

Another object is to facilitate the seating and rising of the user by providing the desk with a displaceable portion to be moved out of the way at such times but also adapted to form a strong and rigid continuation of the desk when the latter is in use. A further object is to provide a novel means for retaining a book or papers on the desk when the same is arranged at an incline. Other objects will appear as the description proceeds.

The invention will be first hereinafter described in connection with the accompanying drawings, which constitute part of this specification, and then more specifically defined in the claims at the end of the description.

In the accompanying drawings, wherein similar reference characters are used to designate corresponding parts throughout the several views:—

Figure 1 is a side elevation of a combined

desk and chair constructed substantially in accordance with this invention, the desk being indicated in an inclined adjustment.

Figure 2 is a front elevation of the same.

Figure 3 is a detailed section on the line III—III of Figure 4 to illustrate more particularly the means for locking the desk in different adjustments towards or away from the occupant of the chair.

Figure 4 is a front view of the desk-supporting frame looking at the same from the right hand side of Figure 3 with the front plate 9 of said frame removed and the desk shown in section.

Figure 5 is a detailed front elevation of the desk and its supporting frame, showing the raised position of the displaceable section of said desk, as when the user is sitting down or rising from the chair.

Figure 6 is a side elevation of a modified form of the desk-supporting frame with the desk mounted thereon.

Figure 7 a section thereof corresponding to Figure 3.

Figure 8 is a section of the desk support alone taken from front to back and showing the hinged top portion thereof adjusted at an incline, and

Figure 9 is an under plan view of the modified form of desk-supporting frame.

In Figures 1 and 2 a suitable type of chair is indicated at 1, the same having a vertical column 2 at one of its front corners for supporting the desk 3. The chair may be equipped with magazine racks 4 and a drawer 50. In the upper end portion of the column 2 two vertical slots 5 are formed for the vertical adjustment of the desk-supporting frame thereon as by bolts 6 passed through a vertical member 8 of said frame and also through said slots 5 in the column, said bolts being fitted with thumb nuts 7 for clamping said member 8 to said column at any desired point along said slots.

The desk-supporting frame comprises in addition to a stationary portion, of which the member 8 is a part, a top member 12 hinged at 11 along the rear edge of said stationary portion and adapted to be swung to different inclinations as suggested in solid lines in Figures 1 and 2 and in dotted lines in Figure 3. The stationary portion of the frame has front and rear vertical flanges 9 and 10 at opposite ends of the member 8, and side pieces 18 extending between the

edge portions of said flanges 9 and 10. When the hinged member 12 is lowered to horizontal position it is supported on said side strips 18 and the front flange 9, as shown in Figure 3.

For supporting the hinged member and desk at different inclinations, arcuate depending racks 14 are secured to said hinged member 12, the racks preferably being formed on the downwardly bent ends of a strip 13 extending across the front end portion of the hinged member and suitably fastened thereto, and the notches 15 in said racks being adapted to receive the ends of a latch bar 16 which projects through and is guided in slots 17 in the side strips 18. As shown in Figures 1 to 4, and best in Figure 3, the latch bar 16 is normally pressed into engagement with the racks by a coiled spring 22 abutting at one end against said latch bar and at the other end against a sleeve or collar 21 preferably formed from a portion of the metal of the member 8 bent around a rod 19 which is connected in any suitable manner to the latch bar and also serves as a support for the coiled spring 22 through which it extends. The rod 19 extends rearwardly through the flange 10 and is formed with a handle 20 for withdrawing the latch bar from engagement with the notches of the racks against the action of the spring 22 when it is desired to change the inclination of the desk. As shown in Figures 6 to 9, and best in Figure 7, the rod 19 may have an enlarged portion 24 forming an abutment for the spring 22 which may also be housed in a casing 23 preferably formed from metal cut and bent over from the upper edge of the member 8. In this way the spring is protected and concealed.

The desk 3, which is preferably made of wood, is arranged to slide forward and backward on the hinged member 12, and for this purpose rabbeted strips 25 are suitably secured along the under face of said desk to engage the edge portions 26 of said hinged member 12. To retain the desk at different positions along the hinged member a series of sockets 27 are formed in the under surface of said desk, as best shown in Figure 3, and a spring-pressed latch pin 30 is arranged to project through said member 12 to engage any one of said sockets according to the position of the desk. The sockets 27 are preferably reinforced by a metal plate 28 having a series of openings 29 registering with and leading to said sockets. These openings 29 in the metal plate 28 are preferably beveled or countersunk, as shown in Figure 3, in order to guide the latch pin 30 into the same when adjustments are being made.

As shown in Figures 1 to 4, and best in Figure 3, the latch pin 30 may be pivotally connected to one arm of a bell-crank lever

31 which is hung between lugs 32 depending from the hinged member 12, the other arm of said lever serving as a handle for withdrawing the pin from the sockets in the desk. A coiled tension spring 33 extends between the handle arm of the lever 31 and a lug 34 depending from the member 12 for normally holding the pin in engagement with one of the sockets. As shown in Figures 6 to 9, and best in Figure 7, the latch pin 30 may also form a part of a reduced rod 38 having its lower end bent to serve as a handle. The upper portion of said rod extends through a tubular housing 35 in which a coiled compression spring 36 is arranged about said rod with one end abutting against the pin and the other end engaging the lower end of the housing. The rod 38 may have a collar 37 to engage the lower end of the housing for limiting the upward movement of the pin. A direct downward pull on said rod will disengage the pin from the sockets in the desk, thereby permitting said desk to be moved forward or backward on the hinged member 12, and when the rod is released the spring 36 will cause the pin to engage the socket which is in alinement therewith. It will be noted that the means for adjustably retaining the desk at different inclinations is entirely separate and distinct from the means for adjustably holding the desk in different ones of its sliding positions on the hinged member, so that there is no danger of one adjustment being accidentally altered while the other is being made. At the same time, both means of adjustment are in very convenient reach of the occupant of the chair so that either or both adjustments can be easily and quickly made when desired.

The front edge of the hinged member 12 is preferably turned down, as at 39, to form a finish and strengthen said member transversely. As shown in Figures 6 to 9, said hinged member may be provided with depending flanges 40 to close the spaces at the sides between the upper edges of the stationary part of the desk-supporting frame and the hinged member when the latter is swung up at an incline, as best shown in Figure 8. The forward edges of said flanges 40 may be turned in, as at 41, in line with the turned down edge 39 of the hinged member. The edges 26 of said hinged member extend beyond the depending flanges 40 for engagement with the rabbeted strips 25 as clearly shown in Figures 6 and 9.

To facilitate the seating and rising of the occupant of the chair, the portion of the desk which extends across in front of said chair is made in the form of a hinged leaf 42 secured to the main portion 3 of the desk by hinges 43 at the front and rear edges thereof. The front hinge is preferably flush with the top surface of the desk,

but the rear hinge, which is nearer the occupant of the chair and is at the lower edge of the desk when the same is arranged at an incline, has its upper edge projecting above the surface of the desk forming a ledge 48 to hold books and papers from slipping off the desk.

The hinged leaf 42 is preferably made somewhat thinner than the main portion 3 of the desk, and the latter is formed with a rabbeted edge 49, Figures 4 and 5, for supporting said leaf when lowered into the plane of the desk proper for use. For supporting the leaf in raised position, as shown in Figure 5, a pair of rule jointed links 45 and 46 are provided, the link 45 being hinged to a fixture 44 secured to the under face of the leaf 42, and the link 46 being hinged to a lug 47 secured to the under face of the rabbeted ledge 49 of the desk and inclined sufficiently to allow the link 46 to clear the edge of said ledge when the leaf is raised to the position indicated in Figure 5.

The leaf 42 may be provided with the transverse tongue 50' projecting from its lower edge, which tongue is adapted to engage in the groove 51 formed in the desk portion 3 when the leaf is lowered, said tongue having its lower edge slightly beveled or rounded at 52 to facilitate the engagement or disengagement thereof with the groove 51 when the leaf is swung. When the leaf 42 is lowered (Fig. 4), the tongue 50 engages in the groove 51, and when pressure is applied to the upper surface of the leaf, the upper wall of the groove 51 serves as an abutment to the upward movement of the tongue 50, whereby cooperation between the ledge 49 and said tongue and groove connection is established for supporting the leaf 42, thereby relieving the leaf hinges of much strain.

I claim:

1. In a device of the character described, the combination with a supporting frame, of a desk hinged thereto, depending racks on said desk, said racks being arcuate in formation and substantially spaced from each other, and a single spring pressed latch mounted to slide on the frame and having a cross-bar adapted to engage said racks simultaneously for holding the desk at different inclinations.

2. In a device of the character described, the combination with a supporting frame having side pieces provided with horizontal slots, of a latch mounted to slide on said frame and provided with a cross-bar having its end portions extending through and guided in said slots, a desk hinged to the frame, and spaced depending racks on the desk to be simultaneously engaged by said

cross-bar for holding said desk at different inclinations.

3. In a device of the character described, the combination with a supporting frame, of a desk mounted to slide thereon, there being a series of sockets in the under face of said desk, and an axially movable latch pin extending through the top of said frame to engage any one of said sockets for securing the desk in adjusted position on the frame.

4. In a device of the character described, the combination with a supporting frame, of a desk hinged thereto, depending racks on said desk, a latch mounted to slide on said frame and adapted to engage said racks for holding the desk at different adjustments, a spring coiled about said latch for normally pressing the same into engagement with the racks, and a casing for housing and concealing said spring and through which said latch is axially movable.

5. In a device of the character described, the combination with a supporting frame, of a top member thereof, a desk mounted to slide on said top member, there being a series of sockets in said desk, an axially movable latch pin on said top member to engage any one of said sockets for fastening the desk to said member, a spring coiled around said latch pin for normally pressing the same into engagement with one of the sockets, and a casing for housing and concealing said spring and through which said latch pin extends.

6. In a device of the character described, the combination with a desk, of a displaceable leaf hinged thereto, one of the hinges being arranged at the edge of the desk and having its leaves projecting above the upper surface thereof for a considerable distance along said desk and leaf constituting a book-retaining ledge for the purpose specified.

7. The combination with a chair, of a column at one corner thereof, a desk secured to said column, a leaf extending across in front of the chair and hinged to the desk to swing upward to facilitate the seating and rising of the occupant of the chair, and means for supporting said leaf in the plane of the desk when in use, said means including a tongue and groove connection between said leaf and desk and a ledge extending beneath the leaf from the desk, said groove being arranged in the under surface of the desk and said tongue extending from the leaf into said groove when said leaf is lowered, whereby strain is removed from the hinges.

In testimony whereof I have hereunto affixed my signature this day of November, 1920.

JOHN R. MOORE.