J. G. S. DEY.

CONVERTIBLE OFFICE DESK.

APPLICATION FILED OCT. 16, 1908.

928,185. Patented July 13, 1909.

Fig. 1.

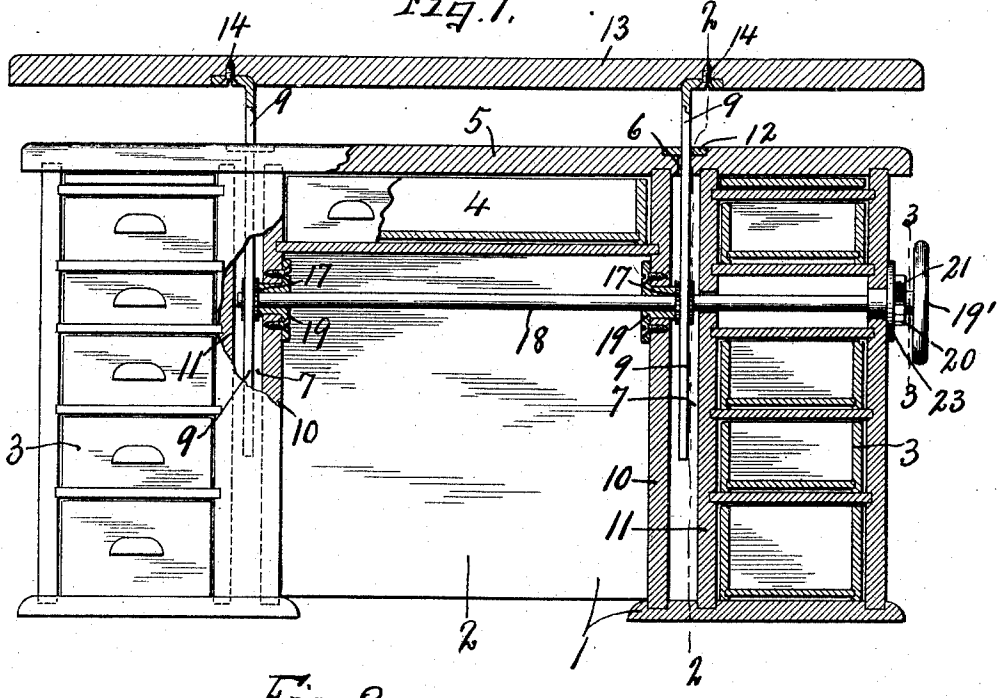


Fig. 2.

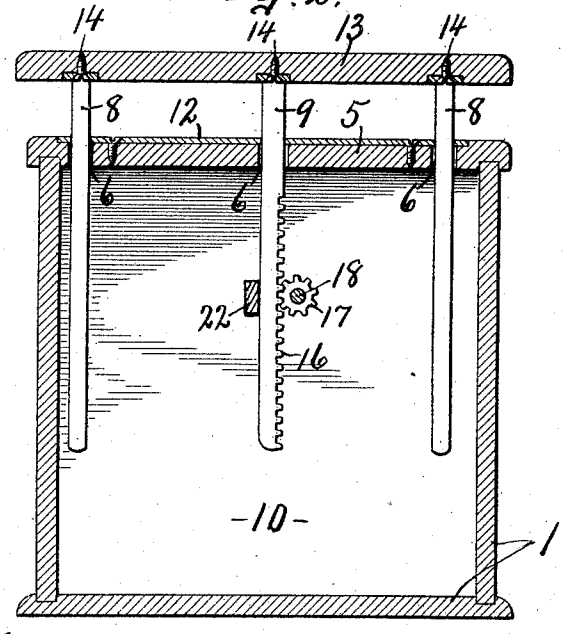
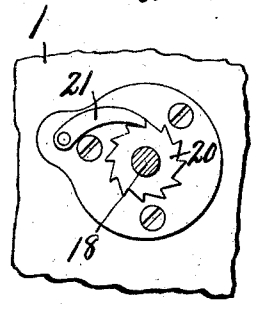


Fig. 3



Witnesses.

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UNITED STATES PATENT OFFICE.

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CONVERTIBLE OFFICE-DESK.

No. 928,185. Specification of Letters Patent. Patented July 13, 1909.

Application filed October 16, 1908. Serial No. 458,089.

To all whom it may concern:

Be it known that I, JAMES G. S. DEY, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Convertible Office-Desks, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to certain improvements in convertible office desks preferably of the flat table type in which the main object is to make the top adjustable for either a sitting or standing position. In other words, I have sought to provide an ordinary flat top desk with a superposed extra top and separate mechanism for raising and lowering said superposed top and holding it in any of its adjusted positions and at the same time to conceal the greater portion of the mechanism by which the extra top is adjusted.

Other objects and uses will be brought out in the following description.

In the drawings—Figure 1 is a front elevation partly in section of a convertible desk embodying the features of my invention. Fig. 2 is a transverse sectional view taken on line 2—2, Fig. 1. Fig. 3 is a sectional view taken on line 3—3, Fig. 1, showing particularly the stop pawl and ratchet for holding the adjustable top in its adjusted position.

This desk as shown in the drawings comprises essentially a main supporting frame —1— having a central knee space —2— opening from its front side, and opposite tiers of drawers —3—, those of each tier being located above the other and at opposite sides of the knee space —2—, an extra central drawer —4— being arranged just above the knee space. This frame is provided with the ordinary top —5— extending horizontally across the upper portion of the entire frame above the draws —3— and —4— but in this instance is provided with two sets of vertical openings —6—, three in each set which are alined with vertical compartments —7— for the reception of two sets of vertical guide rods —8— and —9— corresponding to the number of openings —6—. The compartments —7— in which the vertical rods —8— and —9— play are separated from the knee space and draw compartments by suitable partitions —10— and —11— which serve to conceal the guide rods —8— and —9—.

Secured to the upper side of the top —5— and preferably recessed therein are suitable metallic plates or bars —12— having apertures therein alined with the apertures —6— and forming metal bearings for the guide rods —8— and —9— to prevent undue wear upon the wood top —5—. The upper ends of these guide rods —8— and —9— are deflected laterally and are secured to the under side of a superposed or extra top —13— which is supported by the offset ends of the rods —8— and —9— and is substantially coextensive with the top —5—, the upper ends of the bars —8— and —9— being preferably recessed into the under side of the top —13— and are secured thereto by suitable screws —14—. This superposed top —13— projects longitudinally and laterally some distance beyond the underlying pendent guide rods —8— and —9— and, therefore, conceals said rods from view particularly when the top —13—is in its down position, that is, flat against the upper surface of the top —5— as shown by dotted lines in Fig. 1. The guide rods —8— and —9— of each set are spaced nearly uniform distances apart between the front and rear sides of the desk, the guide rods —9— being located at the center or substantially midway between the guide rods —8— and are each provided with a toothed rack —16— which meshes with a pinion —17— on a rotary shaft —18—. This shaft is journaled in suitable bearings —19— in the inner partitions —10— nearly midway between the front and back of the desk and extends longitudinally across the knee space —2— and between two adjacent draws at one side of the desk where it protrudes through the adjacent side of said desk and is provided with a suitable hand wheel —19′— and a ratchet wheel —20—, the latter being adapted to be engaged by a stop pawl —21— for holding the adjustable top —13— in its adjusted position.

The shaft —18— together with the pinions —17— and racks —16— constitute means for raising and lowering the table top —13—, the racks —16— being held in mesh with their respective pinions by suitable guide stops —22— as best seen in Fig. 2. The outer end of the shaft —18— adjacent

the hand wheel —19— is journaled in suitable bearings —23— to prevent undue springing of the shaft during the adjustment of the table top by the hand wheel —19—.

The upper surfaces of the bearing plates —12— are substantially coincident with the upper face of the table top —5— which is otherwise flat throughout its area. In like manner the under sides of the offset portions —8— and —9— are coincident with the plane of the lower face of the adjustable table top —13— which is also flat throughout its area thus permitting the table top —13— to lie in close contact with the upper face of the top —5— when the top —13— is in its extreme down position. It is now clear that superposed top —13— may be adjusted to any height within the range of the length of the racks —16— to be used by the operator in either sitting or standing position.

If it should be desired at any time to dispense with the adjustable top —13—, it together with the guide rods —8— and —9— may be readily withdrawn upwardly until the lower ends of the guide rods clear the upper face of the top —5— whereupon the superposed top may be laid aside and the desk used in the ordinary way for sitting position and may be similarly used with the superposed top in its extreme down position or the latter may be adjusted by simply rotating the shaft —18— by means of the hand wheel —20— to the desired height to be used in a standing position and stopped at any intermediate adjustment for use by persons of different height.

What I claim is:

1. A convertible desk comprising a main frame having a top formed of a fixed and an adjustable section, said adjustable section superposed upon said fixed section and movable toward and from the said fixed section, said fixed section provided with a plurality of openings, means to provide a pair of compartments below the fixed section, guide stops within said compartments, guide rods extending through said openings, guided by said stops and connected to the adjustable section and formed with toothed racks, a rotary shaft journaled in the main frame and provided with pinions engaging with said racks, said pinions adapted to vertically move said rods when said shaft is rotated, means for rotating the shaft, and means for holding the shaft against rotation by the weight of the adjustable section of the top.

2. A convertible desk comprising a main frame having a top formed of a fixed and an adjustable section, said adjustable section superposed upon said fixed section and movable toward and from the said fixed section, said fixed section provided with a plurality of openings, means to provide a pair of compartments below the fixed section, guide stops within said compartments, guide rods extending through said openings and into said compartments and guided by said stops and having angularly disposed upper ends countersunk in and secured to the lower face of the adjustable section, said guide rods provided with toothed racks, a rotary shaft journaled in the main frame and provided with pinions engaging with said racks, said pinions adapted to vertically move said rods when said shaft is rotated, means for rotating the shaft, and means for holding the shaft against rotation by the weight of the adjustable section of the top.

In witness whereof I have hereunto set my hand this 12th day of October 1908.

JAMES G. S. DEY.

Witnesses:
H. E. CHASE,
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