3 Sheets—Sheet 1.

C. W. MILES.

COMBINED TABLE AND WRITING DESK.

No. 181,963. Patented Sept. 5, 1876.

Fig. 1.

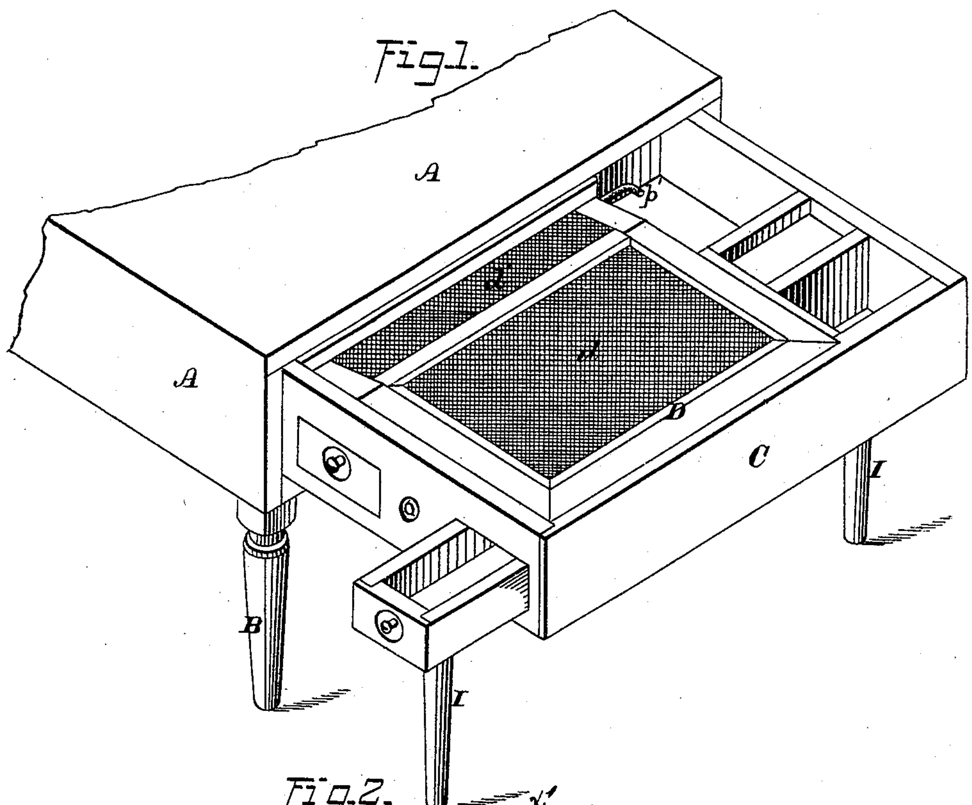

Fig. 2.

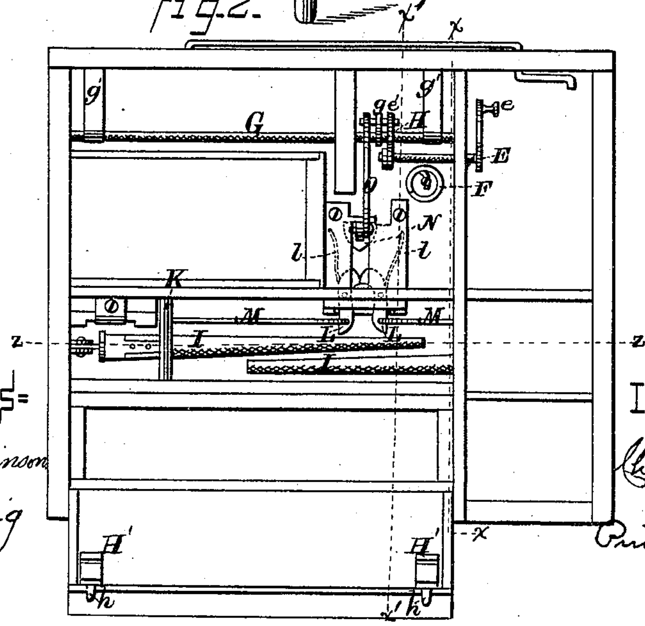

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Fig. 3.

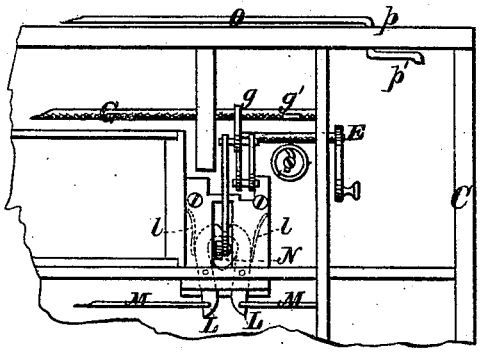

Fig. 4.

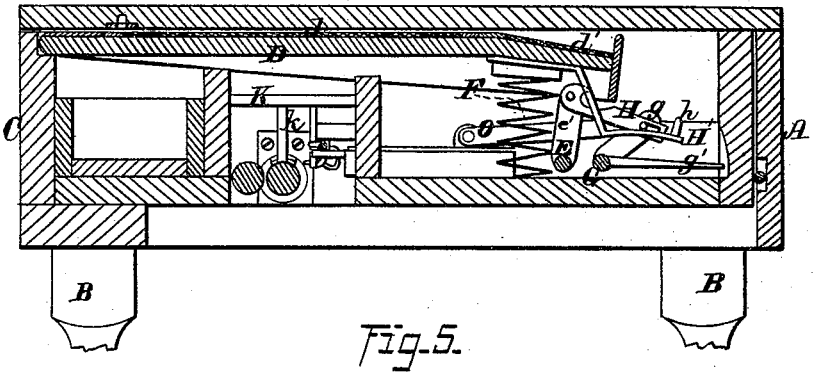

Fig. 5.

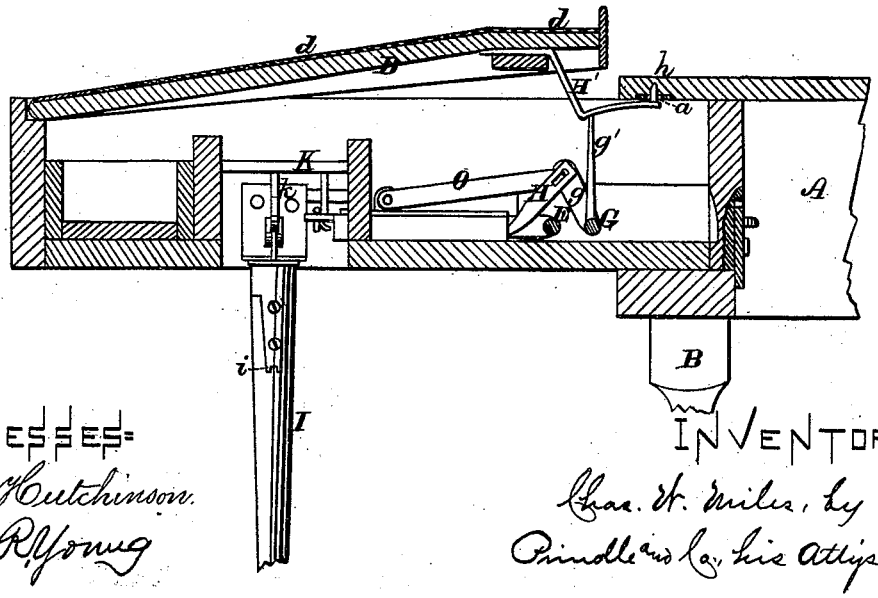

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Fig. 6.

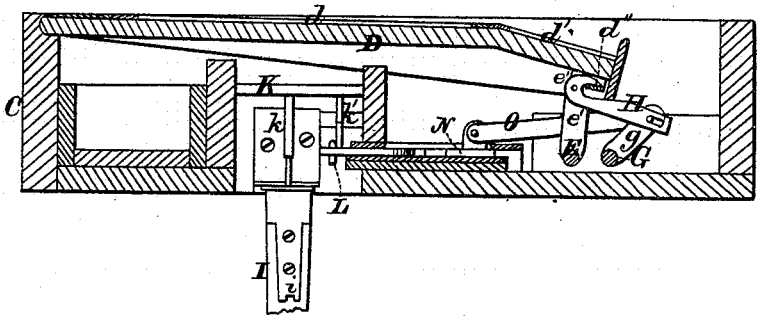


Fig. 7.

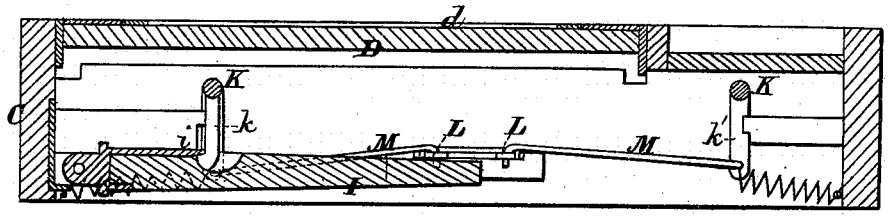
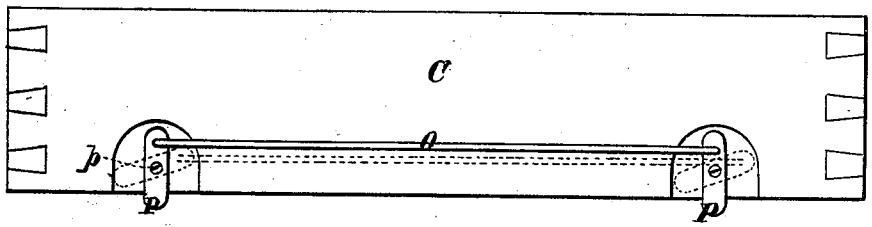


Fig. 8.



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UNITED STATES PATENT OFFICE.

CHARLES W. MILES, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN COMBINED TABLE AND WRITING-DESK.

Specification forming part of Letters Patent No. **181,963**, dated September 5, 1876; application filed May 25, 1876.

To all whom it may concern:

Be it known that I, CHARLES W. MILES, of Jersey City, in the county of Hudson and in the State of New Jersey, have invented certain new and useful Improvements in Combined Tables and Writing-Desks; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my combined table and desk as arranged for use. Fig. 2 is a plan view of the upper side of the sliding portion of the same, separated from the table, and having its hinged writing-surface raised, so as to expose to view the interior mechanism. Fig. 3 is a partial plan view of the same, showing a different position of said mechanism. Figs. 4 and 5 are vertical sections of the device upon line *x x* of Fig. 2, and show, respectively, the relative positions of parts when the sliding portion is closed and opened. Fig. 6 is a like view upon line *x' x'* of Fig. 2. Fig. 7 is a vertical transverse section upon line *z z* of said figure, and Fig. 8 is an elevation of the rear end of the sliding portion.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to combine, in a compact and convenient form, a table and a writing desk; and to this end it consists, principally, in a combined table and writing-desk in which the latter is contained within a drawer that slides horizontally into the former, and is provided with folding legs, which furnish a support for the same when drawn outward from said table, substantially as and for the purpose hereinafter specified. It consists, further, in the means employed for raising to, and securing in, an inclined position the writing-table, substantially as and for the purpose hereinafter shown. It consists, further, in the means employed for locking in position the writing-table when arranged for closing the desk, substantially as and for the purpose hereinafter set forth. It consists, further, in the means employed for securing in, and releasing from, horizontal position the folding supplemental legs, substantially as and for the purpose hereinafter shown and described. It consists, further, in the means employed for locking the sliding portion of the device in position when withdrawn from the table and arranged for use as a desk, substantially as is hereinafter specified. It consists, finally, in the device as a whole, its several parts being constructed and arranged to operate in the manner and for the purpose substantially as hereinafter shown.

In the annexed drawings, A represents a table of usual construction, supported by or upon suitable legs B and B, and provided within one side with a drawer, C, which may have any desired horizontal dimensions with relation to said table, but, preferably, fills the space between its ends and sides when closed. Hinged or pivoted at one edge to the front inner edge of the drawer C is a writing-table, D, which has, preferably, about two-thirds the length of the same, extends nearly to its rear side, and has any desired finish of its sloping portion *d* and the horizontal ledge *d'* at its rear side, and is arranged so that its rear portion can be closed downward below the upper edge of said drawer C, as seen in Fig. 4, or raised to position for use, as shown in Fig. 5.

When closed downward to the position shown in Fig. 4, the table D is locked in place by means of the following-described mechanism: A shaft, E, is journaled within the lower portion of the drawer C, near the rear side and right-hand corner of the table D, and in a line with the front of said drawer, and is provided upon its outer end with a handle, *e*, by means of which it may be partially rotated within its bearings, while near its opposite inner end is secured an arm, *e'*, that extends radially upward, and is provided at its upper end with a rearward-projecting hook, *e''*.

The length of the arm *e'* brings its upper end near the lower side of the table D when the latter is depressed, and upon said table is secured a catch, *d''*, which receives and engages with the hook *e''* when the same is moved rearward, the result of such engagement being to lock said table in its depressed position, so as to cause it to offer no obstruction to the movements of drawer C. By moving the handle *e* forward, said writing-table is released,

and its rear side is thrown upward by a spring, F, which is placed between the latter and the bottom of said drawer.

When the writing-table is required for use, its rear side is raised to and supported in position by means of the following-described mechanism: A shaft, G, is journaled within the lower portion of the drawer C, in rear of, and parallel with, the shaft E, and is provided with a radial arm, *g*, which corresponds in length and position to the like features of the arm *e'*, and is connected with the latter by means of a bar, H, that is pivoted to, and extends between, their upper ends, the arrangement being such as to cause said shaft G to be partially rotated by the movement of said shaft E.

A radial arm, *g'*, is secured to each end of the shaft G, and has such arrangement, with relation to the arm *g*, as to cause it to occupy a horizontal position when the writing-table is closed downward, as seen in Fig. 4, and to occupy a vertical position when said table is released and permitted to rise.

Upon the lower side of the table D, directly over each arm *g'*, is secured a metal bar, H', which has the form shown in Figs. 4 and 5, and receives the end of said arm as the same passes from a horizontal to a vertical position; and as said arm has a sufficient length, its said change of position will cause said bar and the rear end of the said writing-table to be raised to the desired height, and when thus elevated said arm, in connection with the second arm, *g'*, furnishes a firm support for and upon which said parts are sustained, as seen in Fig. 5.

To prevent the writing-table from being raised above the necessary point, each bar H' extends rearward beneath the table-top, and bears firmly against the same when in an elevated position. A spur, *h*, formed upon, and projecting upward from, the upper side, at the rear end of each bar H', engages with a corresponding opening, *a*, in said table-top, and affords a further security against the longitudinal movement of the drawer C when the disk is in use.

The drawer C is supported, when drawn outward, by means of two supplemental legs, I and I, which are hinged at their ends to or upon the inner face of each side rail of said drawer, and are capable of being placed in a vertical position, as seen in Figs. 1, 5, and 6, with their lower ends resting upon the floor; or they may be folded inward and upward to a horizontal position, as seen in Figs. 2 and 4.

When occupying the position shown by Figs. 2, 4, and 6, the legs I and I are held in place by the means described below: A shaft, K, is journaled horizontally and transversely above each leg I, near its hinged end, and is provided with a dependent arm, *k*, that is hooked at its end, and at such point engages with a catch, *i*, that is provided upon the upper side of the latter.

To release said legs, the said shafts K and K are partially rotated, so as to withdraw said hooked arms from engagement with said catch, by the following-described means: Two metal bars, L and L, having the form shown in Figs. 2 and 3, are pivoted, near their longitudinal centers, to or upon the bottom of the drawer C, and have their rear ends, which curve inward, in close proximity, while from the outer end of each a rod, M, extends to, and is pivoted upon, the lower end of an arm, *k'*, that extends downward from the nearest shaft K. A suitable spring, *l*, causes each of said bars L to maintain the position shown, with its rear end in contact with the rear end of the opposite bar, while at the same time said springs permit said bars to be moved upon their pivotal bearings, so as to separate their rear ends, and bring their forward ends nearer together, and thus move said shafts K and K until the hooked arms *k* and *k* are withdrawn from engagement with their catches, and the legs I and I released.

The motion of the pivoted bars L and L is effected by means of a block, N, which is made wedge-shaped at its outer end, and is caused to moved from rear to front, so as to pass between and separate the rear ends of said bars by a rod, O, which is pivoted at one end to the arm *g* of the shaft G, and at its opposite end to the upper side of said sliding block. As thus arranged, the motion of the shaft G, while the writing-table is being raised to position for use, operating through the intervening mechanism causes the supplemental legs to be released at the same instant, when the weight of the latter will cause them to drop into position for use. Portions of the drawer not occupied by the mechanism described may be employed for the usual desk purposes, while beneath the writing-table is sufficient space for the introduction of two or more laterally-moving drawers. In order that the drawer C may be prevented from being entirely withdrawn from the table A, two buttons, P and P, are pivoted upon its rear side, and are capable of being turned from a horizontal to a vertical position, so as to cause their lower ends to project below the bottom of said drawer and engage with the inner face of the front of said table. The upper ends of the buttons P and P are connected together by means of a rod, Q, which insures their simultaneous movement, while the pivotal bearing *p* of one of said buttons extends to the inner side of the drawer, and is at such point provided with a handle, *p'*, that enables them to be turned to or from a vertical position, as it may be desired, to prevent or permit of the withdrawal of said drawer.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. In combination with the table A, the drawer C, containing the writing-table D, and provided with the supplemental legs I and I, that may be folded within said drawer, substantially as and for the purpose specified.

2. In combination with the writing-table D, hinged or pivoted at its front edge to or within the front portion of the drawer C, the shaft G, journaled within the rear portion of said drawer, and provided with the radial arms g' and g', and the bars H′ and H′ attached to and projecting rearward from the lower side at the rear edge of said drawer, substantially as and for the purpose shown.

3. In combination with the hinged writing-table D, provided upon its lower side, near its rear edge, with the catch d'', the shaft E, journaled within the drawer C, provided with the hooked arm e'', for engagement with said catch, and having the handle e for use in partially rotating said shaft, substantially as and for the purpose set forth.

4. The means employed for connecting the rear portion of the hinged writing-table D with the table A, consisting of the bars H′ and H′, attached to and projecting rearward from said writing-table, and provided each with an upward-projecting stud, h, which engages with an opening, a, that is provided within the lower side of the top of said table A, substantially as and for the purpose shown and described.

5. In combination with the supplemental legs I and I, provided with the catches i and i, the shafts K and K, having the hooked arms k and k, and arms k' and k', the pivoted levers L and L, the rods M and M, the sliding block N, and the rod O, connected to and operated by the arm g of the shaft G, substantially as and for the purpose specified.

6. In combination with the table A and drawer C, the buttons P and P, connecting-rod Q, and pivotal bearing and handle p and p', substantially as and for the purpose shown.

7. The hereinbefore-described device, in which is combined the table A, drawer C, writing-table D, and supplemental legs I and I, together with locking and releasing mechanism, substantially as described, by means of which said device may be converted into a writing-desk or a table, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of May, 1876.

CHARLES W. MILES.

Witnesses:

GEO. S. PRINDLE,

WILLIAM FITCH.