

UNITED STATES PATENT OFFICE.

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M. OHMER'S SON'S COMPANY, OF SAME PLACE.

TYPE-WRITER DESK.

SPECIFICATION forming part of Letters Patent No. 559,421, dated May 5, 1896.

Application filed June 1, 1895. Serial No. 551,358. (No model.)

To all whom it may concern:

Be it known that we, HIRAM TYLER and JOHN F. OHMER, citizens of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Type-Writer Desks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in type-writer desks.

The several general objects of the invention are, first, to provide an arrangement which when applied to flat-top desks will preserve the full top area of the desk for ordinary uses, as well as when the type-writer is in using position, as when inclosed within the desk; second, to adapt this arrangement to roll-top desks, so that when the type-writer is not in using position or is inclosed the full area of the top proper is preserved for ordinary uses; third, to provide mechanism for raising and lowering the type-writer shelf by one movement in the act of opening and closing a section of the top proper of the desk, whether it be a flat-top or a roll-top desk, and, fourth, to provide certain details of arrangement and construction hereinafter fully appearing, and particularly pointed out in the claims.

In the accompanying drawings, on which like reference letters and figures indicate corresponding parts, Figure 1 is a front elevation of a flat-top desk with these improvements applied thereto; Fig. 2, a perspective view of a roll-top desk with these improvements applied to that type. Fig. 3 is a detail perspective view of a clamp for holding the type-writer to its shelf; Fig. 3^a, a detailed view of the thumb-nut and a part of the bolt forming a portion of said clamp. Fig. 4 is a vertical sectional view on the line *x x* of Fig. 1, looking in the direction of the arrow, with the machine inclosed. Fig. 5 is a similar sectional view on the line *x x*, looking in the same direction, with the machine in using position; Fig. 6, a section showing the catch for holding and releasing the brackets by which the hinged section of a flat-topped desk is supported when folded out; Fig. 6^a, an inside elevation showing the catch for holding and releasing the brackets by

which the hinged section of a flat-top desk is supported when folded out; Fig. 7, a side elevation of the operating mechanism in a modified form; Fig. 7^a, a side elevation of the operating mechanism in a modified form, and Fig. 8 a detail view of one form of spring for aiding in lifting the shelf and of the boss to which the spring is attached.

The letter A designates a desk of the flat-top type, and the letter B a desk of the roll-top type. The arrangement and the mechanism embodied in this invention are the same when either type of desk is used, with the exception that with the flat-top desk a bracket C is hinged by spring-hinges D to one side of the flat-top desk, and adapted to swing out by the action of the spring-hinges, so as to support the hinged section of the top. This bracket carries a plate E, having pivoted to it a latch F, operated by a spring G. The end of the desk is fitted with a metallic bushing H and a plate I. When the bracket is swung in against the desk, the latch F passes into the bushing and drops over the plate I, on which it catches. When the type-writer shelf is being raised to operating position, a part of the mechanism engages the catch F and releases it from the plate I, when the spring-hinges D swing the bracket to the position shown in dotted lines in Fig. 1, ready to support the hinged section of the top when the latter is folded out. (Also shown in Fig. 1.) This hinged section is supported by resting upon the top proper in the type of desk shown in Fig. 2. Otherwise the mechanism and arrangement are the same for the two types of desks.

The hinged top section before referred to is shown at J in all the figures save Fig. 2 and at J' in the latter. To this section is secured a pitman K by a plate L, and this pitman is fitted to the projection M of a pinion O, mounted on a stud P, extending from a bracket Q, formed of two parts at right angles to each other, one of which is secured to the back of the desk. When the hinged section is unlocked, say by the key R, and folded outward, it draws upon the pitman K and revolves the pinion O. The pinion meshes with a toothed segment S, mounted on a stud T, also carried

by the bracket Q, and hence when the pinion rotates the segment also rotates and through its extension U lifts by a link V on a lever W, pivoted at X to the lower part of the bracket Q. The inner end of this lever is drawn upon by a spring Y, while its other end pivotally connects with the type-writer shelf Z, which shelf is supported at its other edge by swinging arms 2, pivoted to plates 3, secured to the desk proper, and to plates 4, secured to the shelf. There are two of these arms, one at each side of the shelf. The type-writer is set upon this shelf, as shown in dotted lines, and is clamped thereto by an improved clamp consisting of a section 5, held to the shelf by a bolt 6 in a slot 6' and thumb-nut 7 and slotted at 8 to receive the clamp-screw 9, by which the section 10 of the bracket is secured to the section 5. The section 10 is slotted at 11 to facilitate the relative adjustment of the two sections and terminates in a hook 12, which engages with the type-writer frame. In this way the machine is securely fastened to the shelf, but easily detached.

In Figs. 1 and 4 the type-writer is down within the desk, and to place it in using position, as shown in Fig. 5, it is simply necessary to take hold of the hinged section J of the top and swing it outward to the dotted position shown in Fig. 1, which operates the parts above described and brings the shelf Z to the position shown in Fig. 5. During this operation the shelf swings forward somewhat, as shown by the change of position of the arms 2, as seen in Figs 4 and 5, and the shelf is so shaped at its inner end and side as to clear the gearing and other devices. The shelf is slightly lower than the desk-top when in raised position, so that the machine will be at the proper height for the operator. The spring Y, being preferably a spiral spring, aids in lifting the shelf by drawing down upon the inner end of the lever W. Any type of spring acting on the lever and on any part of the lever would answer; but the arrangement and form shown are good in practice.

Referring to Fig. 2, it will be understood that on unlocking the hinged section J' it is folded to one side and allowed to rest upon the top proper. The bracket C is not needed in that form of desk.

It will be seen from Figs. 4 and 6 that the projection U engages with the latch F to release the hinged bracket C.

Thus it will be seen that these improvements are applicable to either type of desk, and that in the flat-top type the top area is preserved for use to the same extent when the machine is up as when within the desk. The motion is easy and the parts are firmly locked when the shelf is up, because the line of strain is from the point *a* to the point *b*, as shown in Fig. 1, being below the point *c*, and hence tending to draw down upon the hinged section. Thus the parts are locked when the shelf is up. The same remarks apply to the direction of the line of strain in the type

shown in Fig. 2. It will also be noticed that the shelf Z when down fits snugly between the sides of the desk and thus, together with the back and hinged section of the desk, forms an inclosure, which is practically dust-proof, for the proper keeping of the machine.

Referring to Fig. 7, it will be seen that for the spring Y we have substituted a convolute spring Y', attached at one end by a screw Y'' to a boss Z', extending from the bracket Q, and at the other end connected to the arm U of the segment S, so as to act with a lifting effect upon said arm and thence upon lever W through the link V.

While we have stated that in the roll-top form of desk shown in Fig. 2 the spring-actuated bracket C will not be used, still in some forms of roll-top desks it will be convenient and useful to use this bracket, and the same will enter into the application of these improvements to some types of roll-top desks.

Having thus fully described this invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a type-writer desk, the combination with a section of the top hinged, a swinging shelf beneath said section, mechanism consisting of an operating-pinion supported by the desk and connected to said section, a segment meshing with and operated by the pinion, a lever connected to said segment and to the shelf and operated by said segment, whereby when the section is folded from normal position the shelf is elevated to a place beneath that normally occupied by the said section.

2. In a type-writer desk, the combination with a section of the top hinged and a shelf, swinging arms supporting the shelf at one end, and a spring-actuated lever pivotally supported by the desk and connected to the shelf near the other end, a segment carried by the desk and connected to said lever and a pinion supported by the desk and meshing with the segment and connected by a pitman to the hinged section.

3. In a type-writer desk, the combination with a section of the top hinged, a shelf, and pivoted arms supporting one end of the shelf, of a lever mounted on a bracket and connected to the shelf near the other end, a spring acting on the other end of the lever, a rotatable segment mounted on said bracket having a projection connected to the lever by a link, a rotatable pinion also mounted on said bracket and meshing with the segment and having a projection, and a pitman connecting the projection with the hinged section.

4. In a type-writer desk, the combination with a section of the top hinged, a spring-actuated bracket to support said top and a latch therefor, and a movable shelf, of mechanism connected with said section and said shelf and arranged to raise the latter when the former is folded from the normal position, and adapted to disengage said catch.

5. In a type-writer desk, the combination with a section of the top hinged, of a spring-actuated hinged bracket, a catch for said bracket to hold it closed, and means connected
5 with said top section and adapted to disengage said catch as the section is folded away from normal position.

In testimony whereof we affix our signatures in presence of two witnesses.

HIRAM TYLER.
JOHN F. OHMER.

Witnesses:

C. A. CRAIGHEAD,
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