E. & A. E. OHNSTRAND.

FURNITURE.

APPLICATION FILED SEPT. 22, 1913.

1,196,804.

Patented Sept. 5, 1916.

4 SHEETS—SHEET 1.

Fig. 1

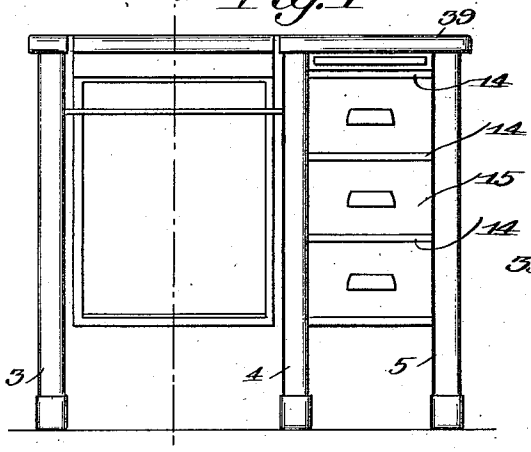


Fig. 2

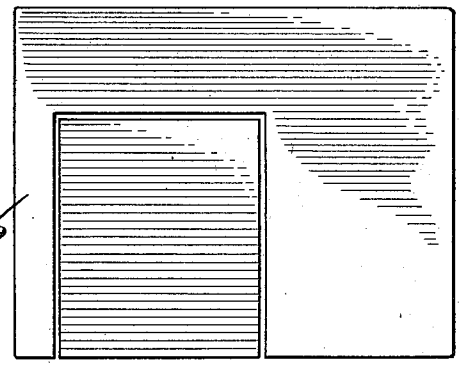


Fig. 3

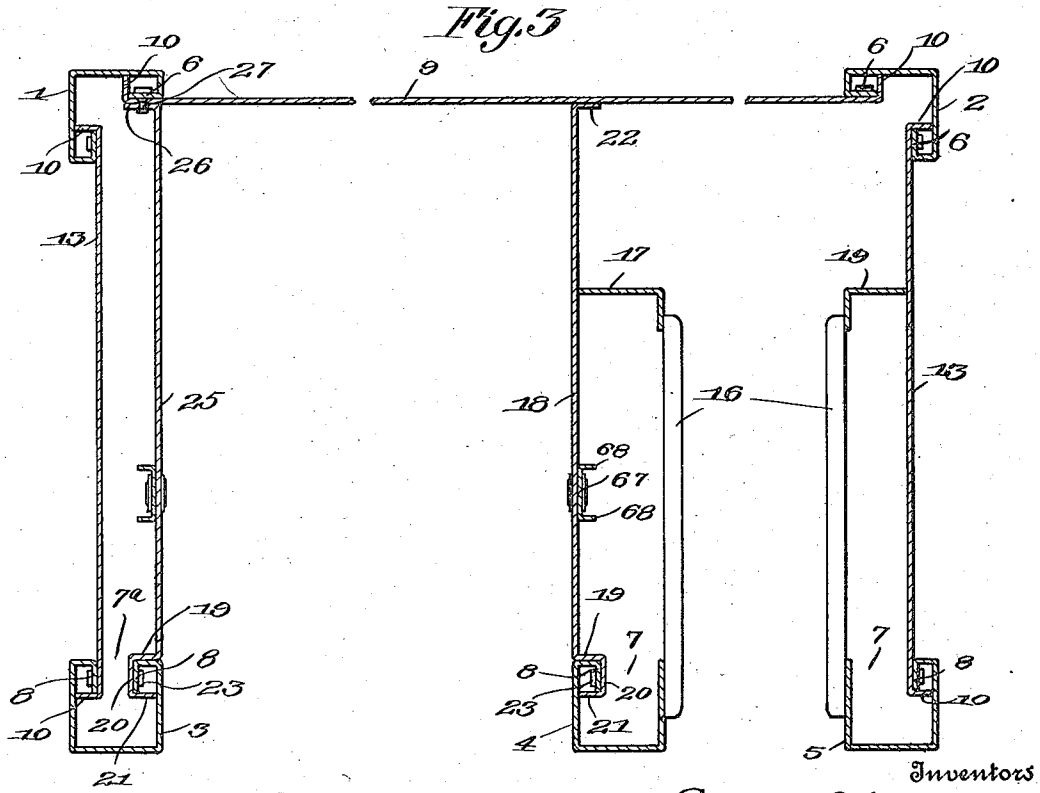
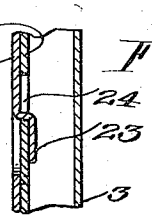


Fig. 9



Witnesses

Ada M. Whitmore.

Frances Jaenbruitz

Inventors

Enoch Ohnstrand and

Aberth E. Ohnstrand

By H. H. Simms

Their Attorney

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4 SHEETS—SHEET 2.

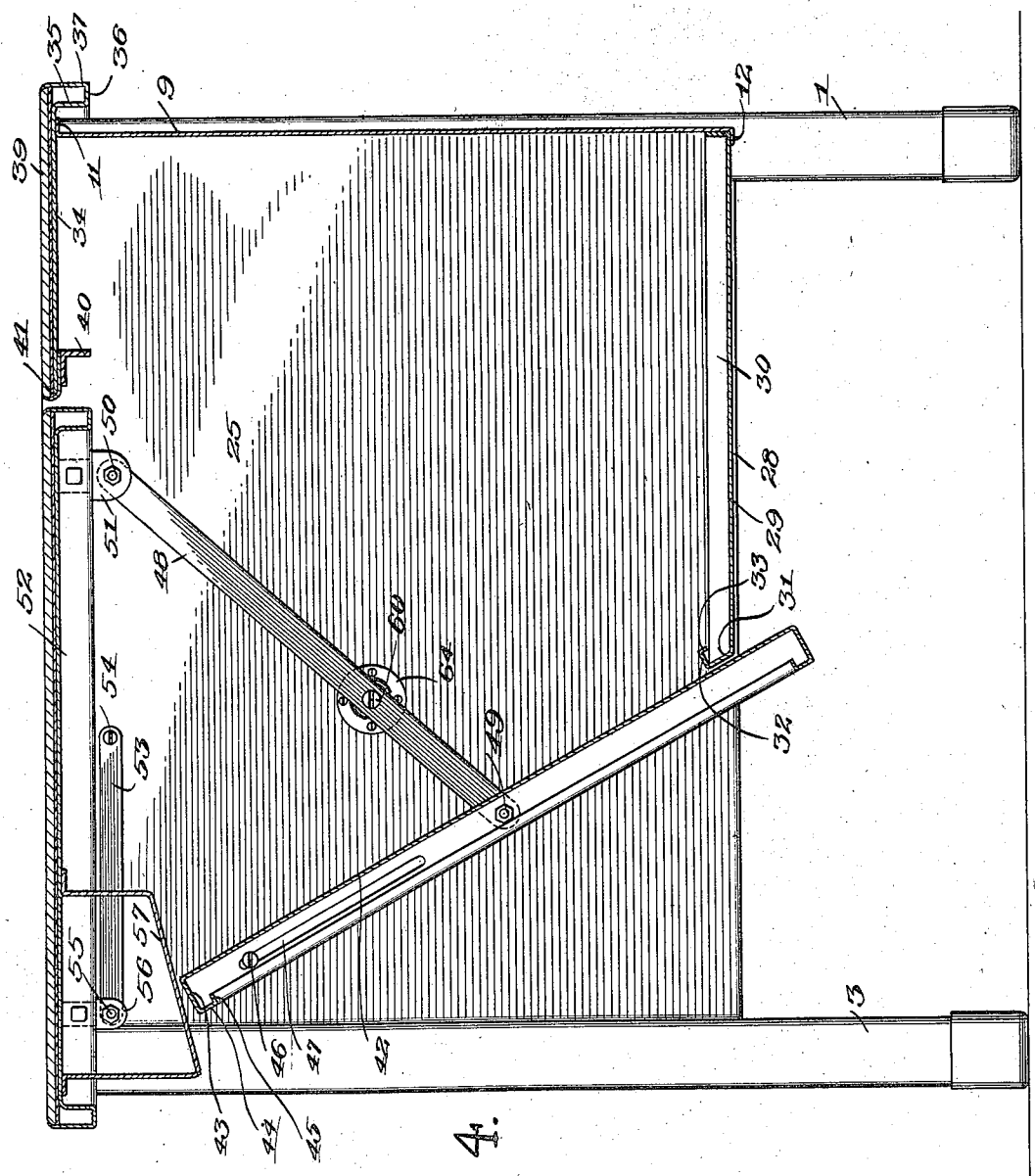


Fig. 4.

Witnesses

Ada M. Whitmore

Frances Jacobowitz

Inventors

Enoch Ohnstrand and

Aberth E. Ohnstrand

By W. W. Simms

Their Attorney

E. & A. E. OHNSTRAND.

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4 SHEETS—SHEET 3.

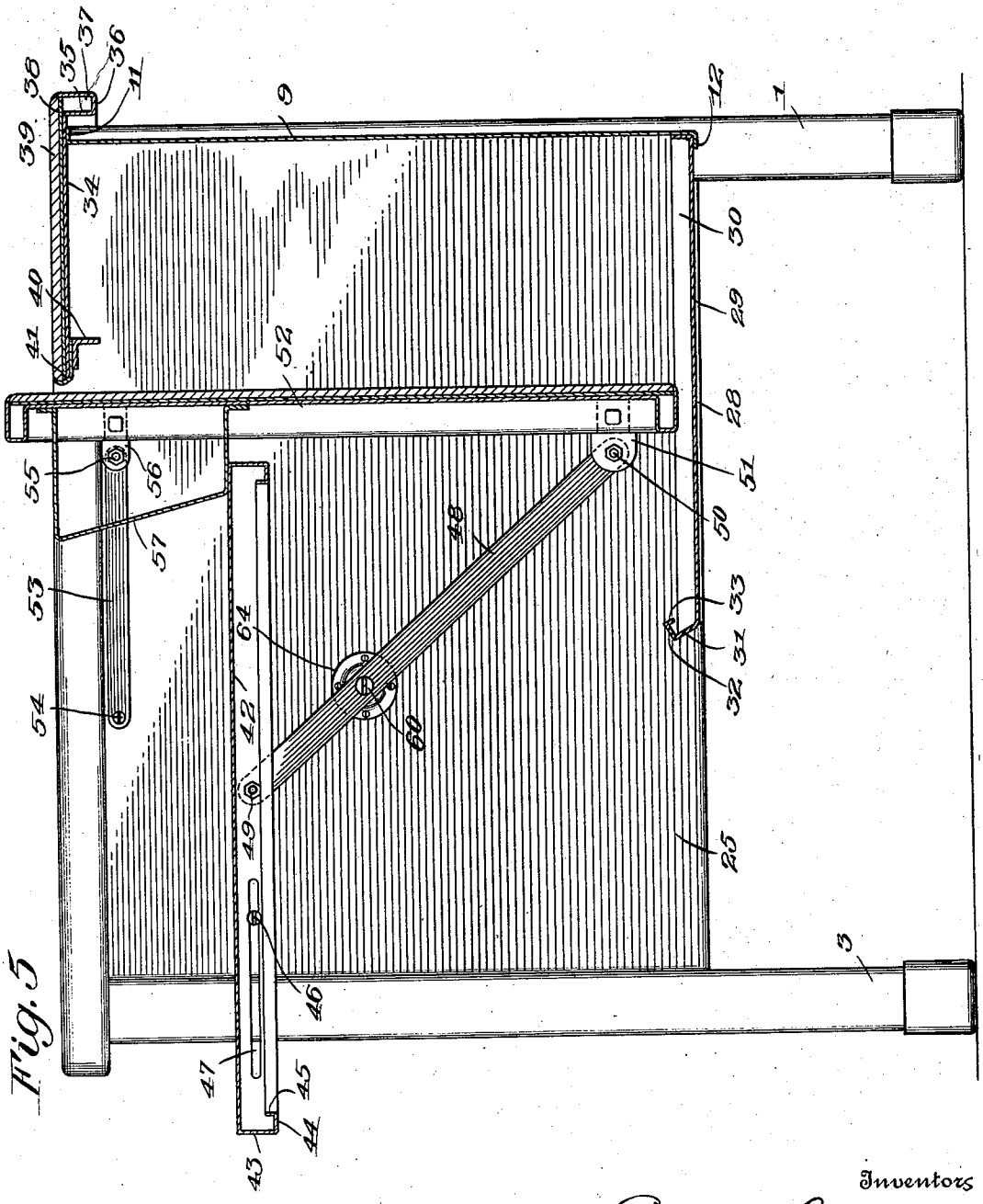


Fig. 5

Witnesses

Ada M. Whitmore.

Frances Juentowitz

Inventors

Enoch Ohnstrand

Aberth E. Ohnstrand

By H. H. Simms

their Attorney

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4 SHEETS—SHEET 4.

Fig. 6

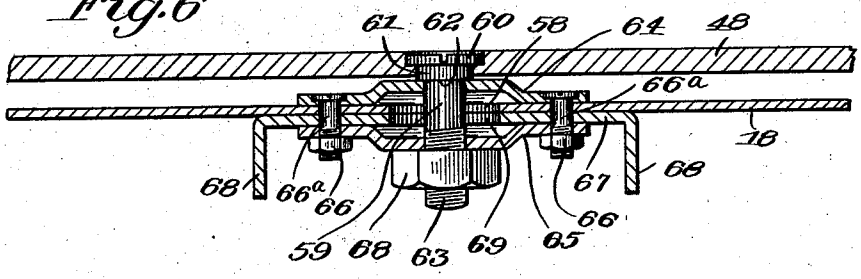


Fig. 7

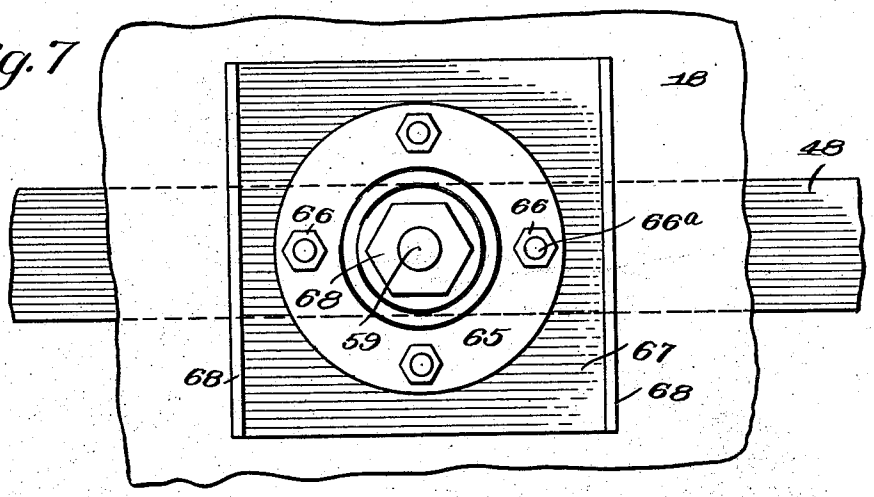
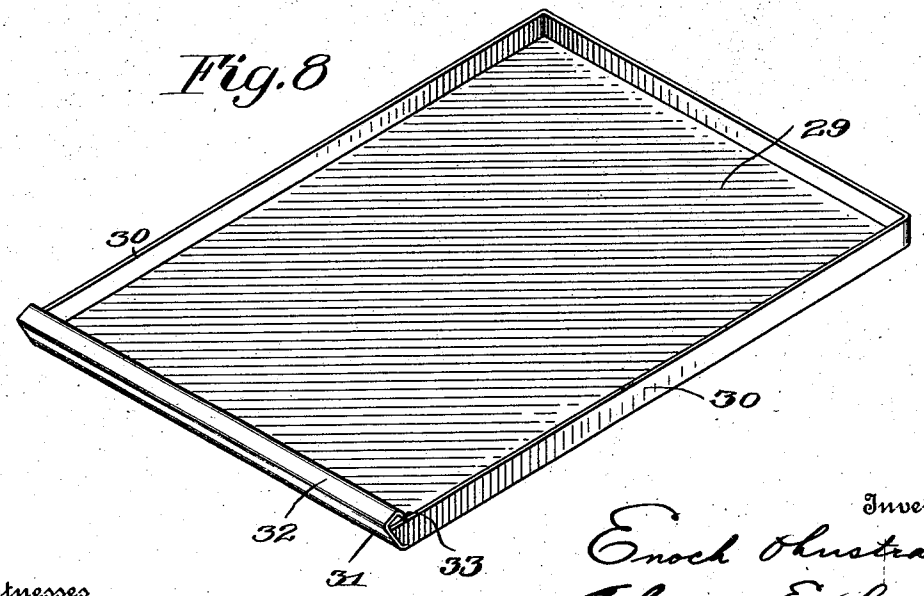


Fig. 8



Witnesses

Ada M. Whitmore.

Frances Jacobowitz

Inventors

Enoch Ohnstrand

Aberth E. Ohnstrand

By H. H. Simms

Their Attorney

UNITED STATES PATENT OFFICE.

ENOCH OHNSTRAND AND ABERTH E. OHNSTRAND, OF SYRACUSE, NEW YORK, ASSIGNORS TO U. S. STEEL FURNITURE COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

FURNITURE.

1,196,804. Specification of Letters Patent. Patented Sept. 5, 1916.

Application filed September 22, 1913. Serial No. 791,070.

To all whom it may concern:

Be it known that we, ENOCH OHNSTRAND and ABERTH E. OHNSTRAND, of Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Furniture, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

The present invention relates to furniture and more particularly to typewriter desks constructed from sheet metal, an object of this invention being to provide for properly centering the operating levers for the tiltable rest or support for the typewriting machine.

Another object of the invention is to improve the desk in such a manner that a strong and durable structure is obtained.

To these and other ends the invention consists in certain parts and combinations of parts all of which will be hereinafter described, the novel features being pointed out in the appended claims.

In the drawings: Figure 1 is a front view of a desk embodying the present improvements; Fig. 2 is a top view of the desk; Fig. 3 is a horizontal section through the desk frame or body with certain parts removed; Fig. 4 is a vertical section on the line *a*—*a*, Fig. 1, showing the desk closed; Fig. 5 is a like section showing the desk opened; Fig. 6 is an enlarged detailed sectional view of the pivot for the operating levers of the typewriter support; Fig. 7 is an enlarged view of the inner face of the pivotal connection; Fig. 8 is a perspective view of the bottom wall of the chamber for the typewriting machine; and Fig. 9 is a detail view showing the connection between the panels and the legs.

According to the illustrated embodiment, the desk embodies five legs or supports indicated at 1, 2, 3, 4 and 5. The rear legs or supports are identical, each being of sheet metal construction in tubular or hollow form and square cross section, one corner of the square being cut away and the edges of the metal being turned inwardly at 6. The front of the desk has three legs 3, 4, and 5. The legs 4 and 5 are substantially the same except that one is right and the other is left. Instead of cutting the corner away, one of the side walls is cut away vertically to provide an opening 7 while, at one side of this opening, an inwardly-turned flange 8 is provided. The other front leg 3 is very similar to the legs 4 and 5 having a cut-away portion at 7^a on one side and flanges 8 turned inwardly on both sides of the cut-away portion or opening.

The rear legs 1 and 2 are connected by a sheet metal wall or panel 9 which has outwardly-turned flanges 10 at its opposite vertical edges an outwardly-turned flange 11 at its inner edge, and an inwardly-turned flange 12 at its lower edge. Near its flanges 10, the panel 9 abuts the inwardly-turned flanges 6 of the legs 1 and 2 so that the free edges of the flanges 10 abut the inner walls of the legs 1 and 2 and the free edges of the flanges 6 abut the sides of the flanges 10, the parts being secured together in any suitable manner. The legs 1 and 2 are connected to the legs 3 and 5 by side panels 13 which have outwardly-turned flanges 10 at their opposite vertical edges coöperating with the flanges of the legs 1, 2, 3 and 5 in a manner similar to that described with relation to the panel 9. These panels 13 also have inwardly-turned flanges at their lower edges and outwardly-turned flanges at their upper edges.

The intermediate leg 4 is connected to the leg 5 by strike bars 14 for the sliding drawers 15 which operate on guides 16 that are supported at their forward ends on the legs 4 and 5 and at their rear ends by sheet metal uprights 17 in any suitable manner. The leg 4 also is connected with the rear panel 9 by a panel 18. This latter panel preferably lies flush with one face of the leg 4 and, to this end, it is provided at its forward vertical edge with a shoulder 19 formed by bending the wall 18 inwardly so that said shoulder may coöperate with that wall of the leg in which the opening or slot 7 is formed. Extending from said shoulder, parallel with the panel 18, is a wall 20 which coöperates with the face of the flange 8, and extending from said wall 20 is a flange 21 turned outwardly to coöperate with the free edge of the flange 8 and the inner wall of the leg 4. The shoulder 19, the wall 20 and the flange 21 form a grooved portion at the end of the panel for receiving the flange 8 of the leg 4 so that the panel 18 will lie flush with that wall of the leg 4 which is at right angles to the wall provided with the opening 7. The rear edge of the panel 18 is provided with an inwardly-turned flange 22 which is secured to the inner face

of the panel 9. The wall 20 is provided with lugs or lips 23 struck up therefrom and adapted to enter openings 24 in the flange 8 for the purpose of holding these parts together.

Between the walls or panels 13 and 18, the drawer section of the desk is formed, whereas, between the panel 18 and the panel 25, the compartment for the type writing machine is formed. The panel 25 is secured to its leg 3 in the same manner as the panel 18 is secured to its leg 4, while the flange 26, at the rear end of the panel 25, is connected by bolts 27 to the panel 9 and the leg 1. The lower edges of the panels 18 and 25 may be provided with inwardly-turned flanges 28 near their rear ends only and these flanges 28, together with the flange 12 on the lower edge of the panel 9, serve as supporting means for the pan 29 which forms the bottom of the typewriting machine compartment and which is formed from sheet metal with an upwardly-turned flange 30 on three of its sides and is also formed with a forwardly and upwardly-turned flange 31 on the front or forward side, the metal then being turned upwardly and rearwardly at 32 and finally downwardly at 33 to provide a suitable stop for the typewriting machine support to be hereinafter described.

The top of the desk may embody a sheet metal plate 34 turned downwardly at 35 at its edges, thence outwardly at 36 and finally upwardly at 37, the upper edge being carried above the plate 24 and turned inwardly. A plate 38 rests upon the plate 34 and serves as a support for a covering material 39 made of linoleum or other suitable material. The top is cut away between the legs 3 and 4 at its forward portion and, in order to support the rear portion, a cross piece 40 connects the panels 18 and 25 and also supports a sheet of material 41 which is bent upwardly to protect the edges of the linoleum 39 as shown in Fig. 5.

Arranged between the panels 18 and 25 is a support or rest 42 for the typewriter, such support being made from a sheet of metal bent downwardly at 43, thence inwardly at 44 and finally upwardly at 45 to simulate wood and to give strength to the support. This support may be mounted on a shiftable fulcrum comprising preferably pivot bolts 46 arranged on the panels 18 and 25 and slots or ways 47 cut in the depending portions 43 of the rest or support 42, said ways extending horizontally or parallel with the upper face of the support 42. To the support or rest 42, the ends of two levers 48 are pivoted, said levers being also pivoted between their ends to the panels 18 and 25 in a manner to be described hereinafter. The other ends of the levers 48 are pivoted at 50 to lugs 51 depending from the under side of the cover 52 of the typewriting machine compartment. The cover 52 may be also supported by links 53 pivoted at 54 to the panels 18 and 25, about midway between the front and rear edges of the cover, when the latter is in horizontal position, said links also being pivoted at 55 to lugs 56 depending from the under surface of the cover near the forward edge of the latter. With the hereinbefore described connection between the cover and the typewriting machine support, these two parts are moved from the positions shown in Fig. 4 to the positions shown in Fig. 5 when a lifting movement is exerted on the forward edge of the cover.

A sheet metal piece 57 is bent, as shown in Figs. 4 and 5, and serves two functions, one to coöperate with the upward or forward end of the support 42 when the latter is in the position shown in Fig. 4, and the other to coöperate with the rear end of said support 42 when the latter is in the position shown in Fig. 5. This projection 57 by its coöperation with the forward end of the support and also by the coöperation of the rear end of the support with the forward end of the pan 29 forms a substantially closed space or compartment.

An important feature of this invention is the manner of connecting the pivots of the levers 48 to the panels 18 and 25. This construction is shown in detail in Figs. 6 and 7. The purpose thereof is to eliminate a great deal of the work now required for accurately positioning the pivot points or turning axes of these levers and to provide self centering pivots. According to this embodiment, the walls 18 and 25 are provided with openings 58 through each of which a pivot bolt 59 for a lever 48 is passed, the opening being materially larger in diameter than the diameter of the bolt. This bolt is provided with a head 60 seated in a pocket in the lever 48 which turns on the bearing portions 61 on the bolt, the bearing portion being larger in diameter than the main portion 59 of the bolt and having a shoulder 62 between said bearing portion and the main portion, the main portion being screw-threaded at 63. Surrounding the bolt, on opposite sides of the panel 18 or 25, are clamping members 64 and 65, preferably of cup formation with their cupped portions opposed. These clamping portions are drawn together on opposite sides of the panel 18 or 25 by a nut 66 arranged on the screw threaded portion 66^a. A reinforcing piece 67 with inwardly-turned flanges 68 along opposite edges is also provided with an opening 69 coincident with the opening 58 in the panel 18 or 25.

In assembling the desk, particularly in the connecting of the levers 48 to the panels 18 and 25, the support 42, the cover 52 and

their supporting parts are tightened before the positions of the pivot bolts 59 are determined. Bolts 59 are first introduced in the opening 58 with the clamping plates 64 and 65 surrounding them and a nut 66 in place. The working of the cover and the support 42 back and forth from the positions shown in Fig. 4 will cause the pivot bolts 59 to seek their proper positions which are maintained by tightening the bolts 59 so that the clamping plates 64 and 65 hold the bolts in their centered positions. When this has been secured, holes are drilled through the panels 18 and 25, the clamping plates 64 and 65 and the reinforcing plate 67 and through these holes the bolts 69 are passed to permanently secure the pivot bolts in their centered positions.

From the foregoing it will be understood that there has been provided a sheet metal desk for typewriting machines, in which the parts are constructed for the purpose of securing cheapness of manufacture and durability in use. The panels between which the chamber for the typewriting machine is formed, lie flush with the legs or support, being connected to the latter in such a manner that a strong and durable structure is obtained. The pivots for the levers of the typewriting machine support are so mounted that they are self centering and are especially adapted for connection with the sheet metal panels.

What we claim as our invention and desire to secure by Letters Patent is:

1. A sheet metal typewriter desk having in combination a back panel and two other panels forming a chamber, the back panel having inwardly-turned flanges along its lower edge and the other two panels having flanges at the lower edges of the rear portions of the two panels, a bottom resting on the flange of the back panel and the flanges of the two panels, said bottom having its forward edge turned upwardly and forwardly thence rearwardly and backwardly and thence downwardly, a movably mounted support arranged in said chamber and adapted to coöperate with the forward edge of the bottom, and a cover for said chamber.

2. In a desk for typewriting machines, the combination with a desk body having a chamber for a typewriting machine, of a top having a portion cut away over said chamber, a cross piece connecting the side walls of the chamber and supporting the top, and a sheet metal piece supported by said cross piece and bent upwardly to cover the exposed edge of the top at the rear of the cutaway portion.

3. In a desk for typewriting machines, the combination with a desk body having a chamber for typewriting machines, of a support for a typewriting machine, mounted upon a shiftable fulcrum within said chamber, a cover for the chamber, and a lever pivotally connected to the support and to the cover, said lever being mounted upon a self-centering pivot provided with means for securing it in its centered position.

4. In a desk for typewriting machines, the combination with a desk body provided with a chamber for a typewriting machine, one side wall of the chamber being provided with an opening, of a support for a typewriting machine, pivotally mounted within the chamber, a cover for the chamber, and a lever pivoted at one end to the support and at the other end to the cover, the pivot of said lever extending through the opening in the side wall of the chamber and carrying clamping means for coöperating with opposite faces of said side wall to hold said pivot against movement after it has been properly centered.

5. In a desk for typewriting machines, the combination with a desk body provided with a chamber for a typewriting machine, one side wall of the chamber being provided with an opening, of a support for a typewriting machine, pivotally mounted within the chamber, a cover for the chamber, and a lever pivoted at one end to the support and at the other end to the cover, the pivot of said lever extending through the opening in the side wall of the chamber and carrying two clamping plates for coöperating with opposite faces of the side wall, and a nut acting to draw said plates into firm engagement with said side walls.

6. In a desk for typewriting machines, the combination with a desk body provided with a chamber for a typewriting machine, one side wall of the chamber being provided with an opening, of a support for a typewriting machine, pivotally mounted within the chamber, a cover for the chamber, and a lever pivoted at one end to the support and at the other end to the cover, the pivot of said lever being in the form of a headed bolt extending through the opening in the side wall and provided with a bearing portion, a reduced portion forming a shoulder and a threaded portion, the reduced portion carrying two clamping plates which coöperate with opposite sides of the wall about the opening through which the pivot is passed, and also carrying a nut on the threaded portion for acting on the clamping plates, and bolts for securing the clamping plates to the wall.

ENOCH OHNSTRAND.
ABERTH E. OHNSTRAND.

Witnesses:
HAROLD H. SIMMS,
ADA M. WHITMORE.