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2,531,381

BUSINESS MACHINE SUPPORT FOR DESK DRAWERS

Filed Sept. 18, 1946

3 Sheets-Sheet 1

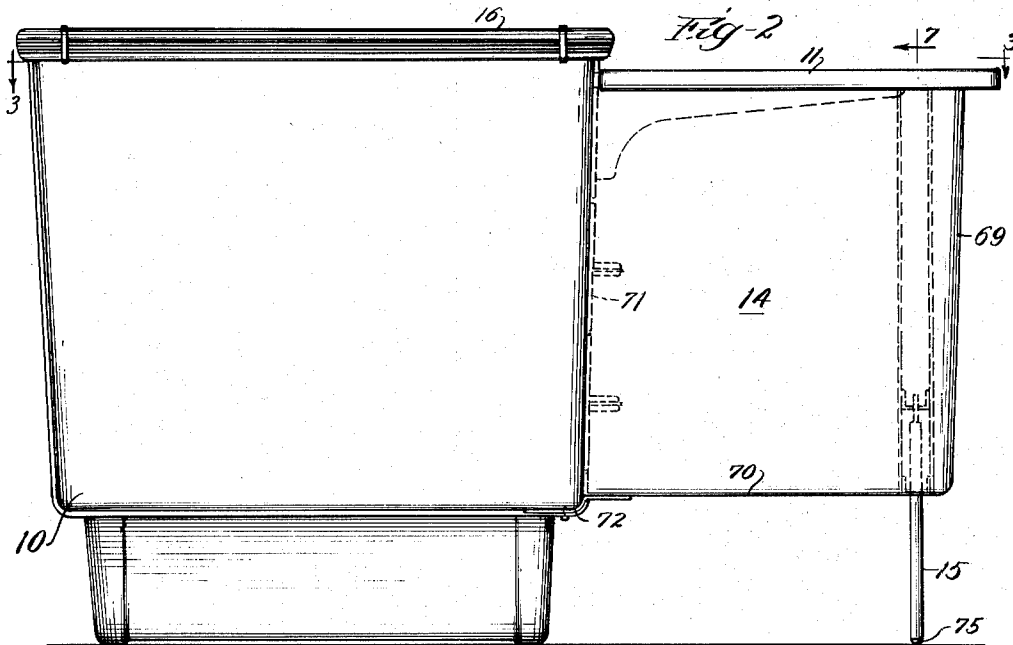
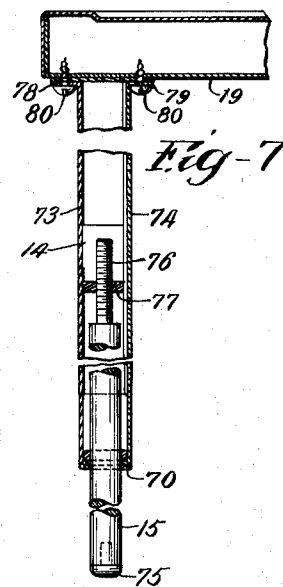
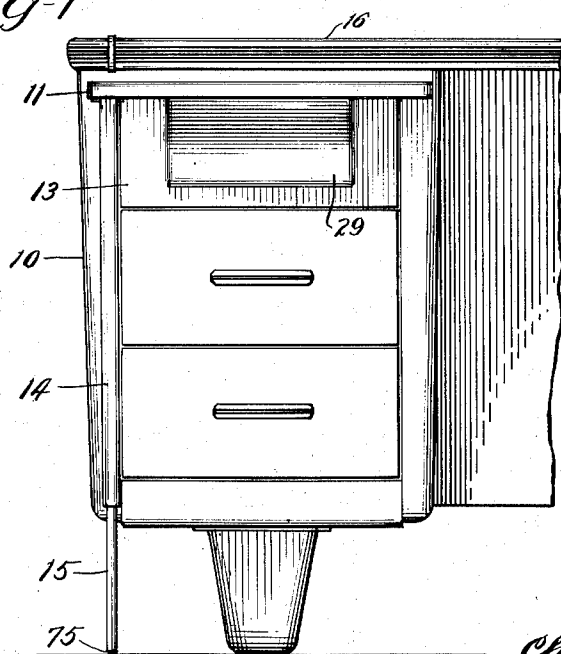


Fig-1



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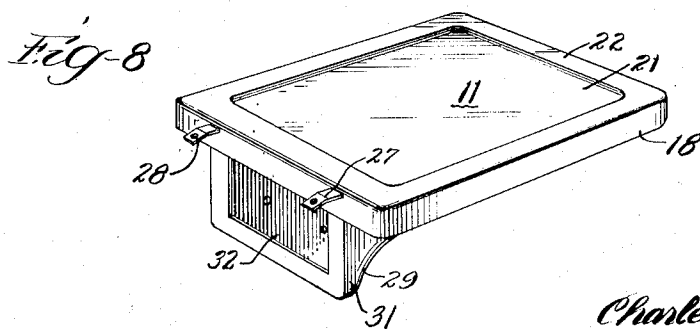
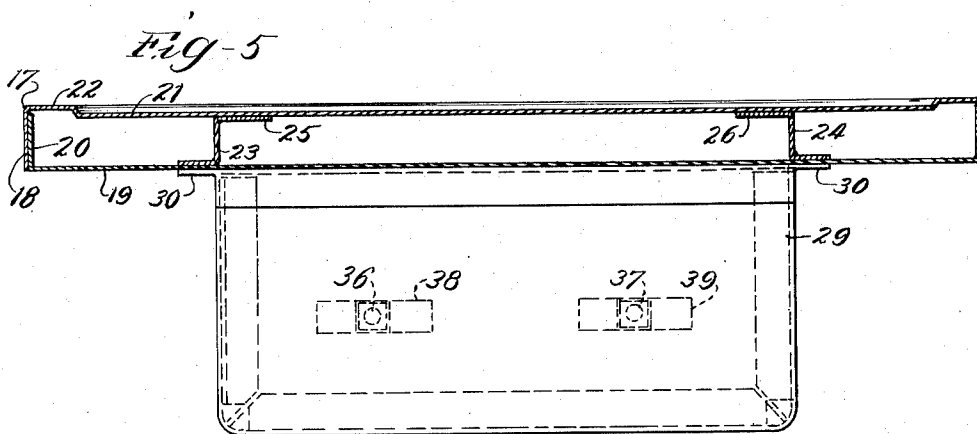
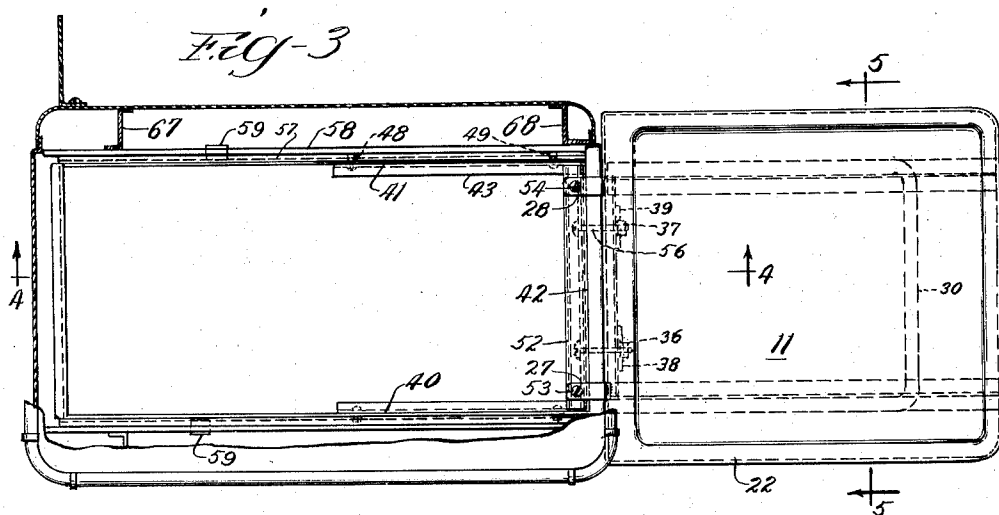
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BUSINESS MACHINE SUPPORT FOR DESK DRAWERS

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3 Sheets-Sheet 2



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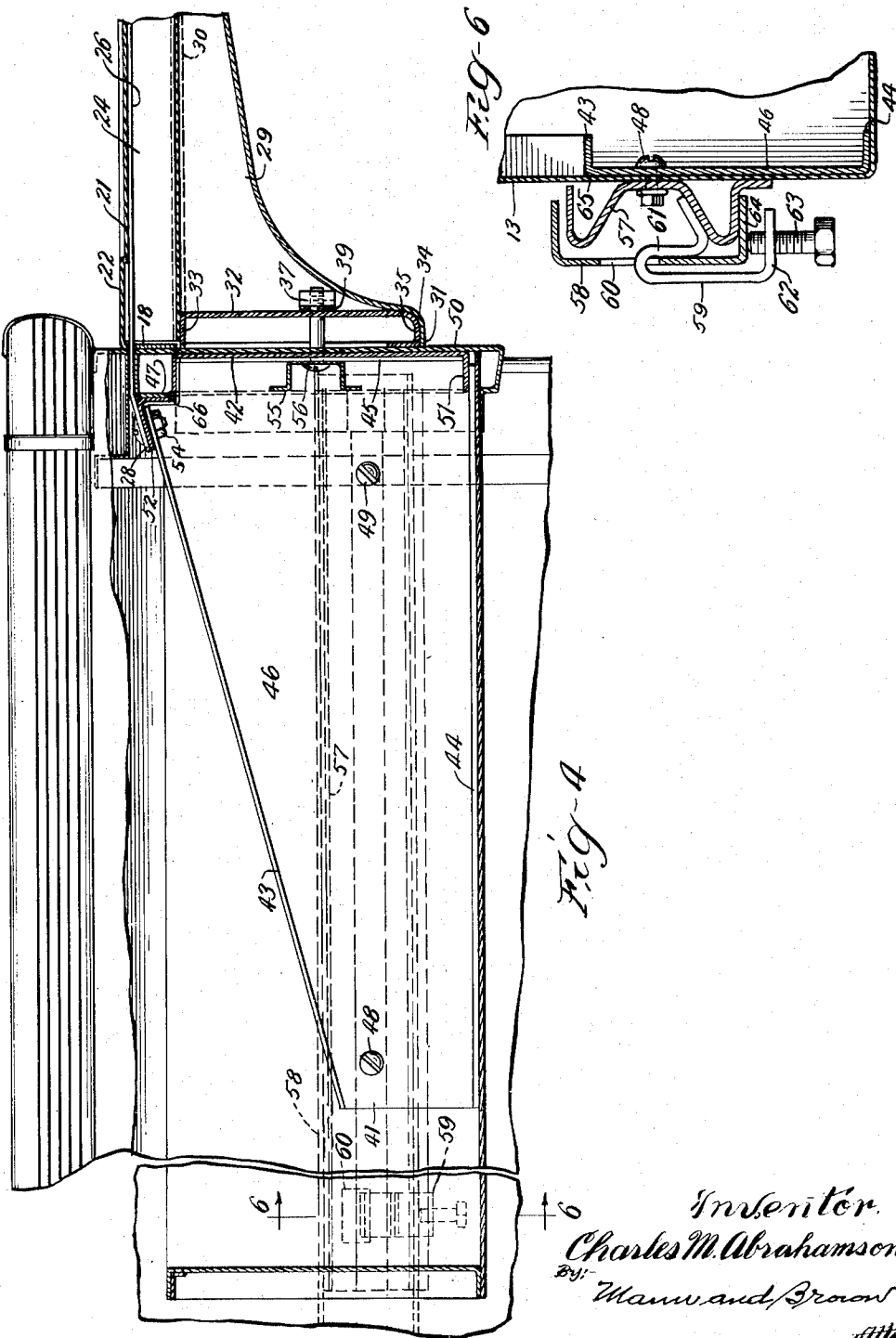
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BUSINESS MACHINE SUPPORT FOR DESK DRAWERS

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3 Sheets-Sheet 3



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BUSINESS MACHINE SUPPORT FOR DESK
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13 Claims. (Cl. 311-17)

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This invention relates to a drawer attachment and more particularly to an attachment means for readily converting a desk drawer into a suitable support for a typewriter or the like.

It is very convenient to be able to readily convert a general purpose office desk to one that may be used by a typist, and vice versa. In this way, large organizations may keep on hand a number of desks, and by a simple alteration adapt them for use either as a general office or junior executive desk, or as a stenographer's desk.

The ordinary typewriter desk, having a disappearing typewriter support, does not adequately serve this purpose, because when used as a general office or junior executive desk, the typewriter occupies substantially one entire pedestal, and gives the desk only central drawer space. Conversely, a so-called "executive type" desk suitable for office work not involving typing or the like, if it is to be used for such work part of the time, should be provided with means for converting the desk into a form suitable for such use. My invention provides such a means.

Accordingly, it is an object of my invention to provide a new and improved attachment means for readily converting a desk drawer into a suitable support for a typewriter or the like. Other objects of my invention are to provide such an attachment means wherein a platform, upon which a typewriter or the like can be placed, is supported by members attachable to the inside and outside of the drawer; wherein the platform supports overlie the drawer front and engage both sides thereof; wherein the platform is additionally supported by a shield which also affords the typist privacy; wherein the drawer, and hence the attachment, is retained against movement when the attachment is in use; wherein the attachment can be quickly and easily connected to the drawer or disconnected therefrom, and when connected, blends harmoniously with the appearance of the desk, and wherein the construction and installation of the attachment is such that the preponderance of the load from the typewriter or such placed on the platform is carried to the desk base by the attachment and only a small portion is carried by the drawer proper.

These and other objects of my invention will become apparent from the following detailed description taken in conjunction with the attached drawings in which

Fig. 1 is a front elevational view of a portion of a desk, including a desk pedestal, and show-

ing my attachment connected to a desk drawer;

Fig. 2 is a side elevational view of the desk portion shown in Fig. 1, and shows the typewriter platform of the attachment being additionally supported by a shield member which is connected to the desk;

Fig. 3 is a sectional view taken on line 3-3 of Fig. 2;

Fig. 4 is a cross sectional view taken on line 4-4 of Fig. 3;

Fig. 5 is a cross sectional view taken on line 5-5 of Fig. 3;

Fig. 6 is a cross sectional view in part taken on line 6-6 of Fig. 4, and showing the means for retaining the desk drawer against movement when the attachment is connected thereto;

Fig. 7 is a cross sectional view of the supporting shield member, with part omitted to reduce the height of the drawing, taken on line 7-7 of Fig. 2; and

Fig. 8 is a perspective view taken from the left rear and looking down on the typewriter platform and supporting brace therefor.

The illustration in Fig. 1 of a left hand desk pedestal 10, as viewed from the front of the desk, shows a platform 11 supported by a brace 29 which is attached to a desk drawer 13. Adjacent a side edge of the platform 11 is connected a shield 14 which extends vertically downward from the platform and which is supported by a foot 15. The area of the shield 14 and the extent of its connection to the platform 11 are illustrated in Fig. 2. Also, this figure shows that the platform 11 extends forwardly of the desk, being at a lower level than the top 16 of the desk. While Figs. 1 and 2 illustrate the platform 11 as being supported from a drawer in the left hand desk pedestal, it can be supported equally well from a drawer in the right hand desk pedestal, in which case shield 14 is attached to the opposite side of the platform 11.

Details of the platform 11 and the supporting structure therefor are best obtained from Figs. 3, 4, 5 and 8. The platform 11 is a hollow panel structure of greater width than the drawer to which it is attached and is preferably made of light weight sheet metal. A top pan 17, see Fig. 5, with a downturned flange 18 around the periphery thereof, is nested over a bottom pan 19 having an upturned flange 20 around its periphery. The top pan 17 has a shallow tray-like depression 21 throughout practically the entire top area of the pan and this depression is bordered by the rim 22. Z-bars 23 and 24 extend longitudinally of the platform between pans

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17 and 19, being in contact therewith, to strengthen the platform 11 and prevent sagging of the top pan 17. The aforementioned Z-bars are preferably attached to bottom pan 19 by spot welds. Top flanges 25 and 26 of Z-bars 23 and 24 extend through the rear edge of platform 11, see Figs. 3 and 8, and appear as strap members 27 and 28.

Attached to the underside of platform 11 is a brace 29 tapered, as is illustrated in Fig. 4. Platform brace 29 is a shallow construction provided with a horizontal rim flange 30, which is spot welded to the underside of platform 11, see Fig. 5. At the rear edge of platform 11, the body portion of brace 29 is flanged outward at 31 (Fig. 4) to retain an end plate 32 which is spaced from a vertical line through the rear edge of platform 11 by a horizontal flange 33 and by the nested construction 34, which includes a flange 35 faced against the flange 31, see Fig. 4. The plate 32 carries two nuts 36 and 37 which are supported by nut retainers 38 and 39 so that bolts can be threaded into them without having the nuts turn.

As shown in Figs. 3, 4 and 6, a drawer guide 57 is attached to the side of drawer 13 and the drawer guide meshes within a guide track 58 which is attached to Z's 67 and 68 of desk pedestal 10. A similar guide rail and track support the outer side of the drawer. Within the drawer 13, and detachably connectable thereto, is a channel-shaped retainer member, as viewed from above, see Fig. 3, made up of side plates 40 and 41 and the bridging front plate 42. Each of the side plates, which may be termed gusset plates, is formed in the same manner, the only difference being that the flanges of one are turned oppositely from the flanges of the other so that, when the side plates are against the sides of the drawer, the side plate flanges extend inward toward the center of the drawer; i. e., the side plates face each other. The side plate 41 is illustrated in Fig. 4 as consisting of a flat body portion 46 having integral therewith and at right angles thereto the intumed flanges 43, 44 and 45. The upper corner of the side plate has a right angle notch at 66 to accommodate the drawer front top channel 47. When the side plate is positioned in the drawer, the body portion 46 lies against the inner side surface of the drawer and, through aligned openings in the drawer side, drawer guide, and the side plate, the bolts 48 and 49 detachably connect the side plate to the drawer, see Figs. 3, 4, and 6. Intumed horizontal flange 44 lies against the bottom of the drawer and the front portion of the side plate lies under the front top channel 47 and the side plate flange 45 abuts against the bridging plate 42.

This latter mentioned plate is coextensive with the inner surface of the drawer front 50 and lies between this surface and the front flanges of the side plates, such as flange 45. These front flanges do not extend fully to the bottom of the side plates but, instead, are notched away sufficiently to allow the bottom horizontal flange 51 of the bridging plate 42 to extend beneath them and rest upon the bottom horizontal flanges of the side plates. Thus, in Fig. 4, flange 51 extends beneath flange 45, and rests upon flange 44. The bridging plate 42 overlies the upper notched corners of the side plates, such as 66, and is formed thereto to accommodate the drawer front top channel 47. Thus, the bridging plate lies between notched out corners of the side plates

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and the drawer front top channel, and also has a flange 52 overlying the sloping top flanges of the side plates, such as flange 43. The flange 52 extends from side plate to side plate across the width of the drawer and is located immediately to the rear of the drawer front top channel 47. Side plates 40 and 41 are spot welded to the front plate 42 to form a single load carrying member. Thus the end of top flange 52 of front plate 42 is welded to the top flange 43 of side plate 41. Front flange 45 of side plate 41 is welded to front plate 42, and bottom flange 44 of side plate 41 is welded to bottom flange 51 of end plate 42. Similarly side plate 40 is welded to end plate 42. Straps 27 and 28 are bent downwardly and are detachably connected to flange 52 by means such as bolts 53 and 54. A flanged channel stiffener 55 abuts against the intumed flanges, such as 45, of the side plates, and is spot welded thereto. This channel stiffener extends horizontally from one side plate to the other and lies approximately midway of the height of the drawer front and adjacent to the rear of the bridging plate 42. The channel stiffener 55, the bridging plate 42 and the drawer front 50 all have a pair of aligned openings therein, said openings also being aligned with the threaded openings in nuts 36 and 37, so that means such as bolt 56 can be inserted through the openings and threaded into the nuts 36 and 37 to secure the bridging plate 42, of the channel shaped retainer within the drawer, to the end plate 32 of the platform brace 29.

The construction thus far described is attached a desk drawer, such drawer 13, in the following manner. Initially, the drawer handle is removed from the drawer front and, in the construction which I prefer to use the drawer handle is retained by two bolts which, when removed, leave two openings in the drawer front. The positioning of the threaded opening in the nuts 36 and 37 and the openings in the bridging plate 42 of the channel shaped retainer, which is positioned within the drawer, and also the openings in the channel stiffener 55, is such that these openings are aligned with the openings in the drawer front. Thus, it is possible to insert a bolt, such as the bolt 56, through the aligned openings and thread it into one of the nuts mounted on the end plate 32. The positioning of the openings in the various parts just referred to and the utilization of the openings through which the drawer handle retaining bolts extend, are not critical to the practice of my invention but instead, are illustrated merely as a preferred and convenient way to detachably connect the various parts without having the appearance of the drawer front marred by openings when the attachment is disconnected from the drawer and the drawer handle is on the drawer. Furthermore, utilization of the bolt openings for the drawer handle retaining bolts makes it unnecessary to provide additional openings in the drawer front 50.

In addition to removing the drawer handle, the inner liner, if any is provided, positioned at the rear of the drawer front; i. e., the liner which is spaced from the rear surface of the drawer front by flanges abutting thereagainst to complete the drawer front thickness established by the drawer front top channel 47, is removed. In the usual metal desk drawer construction such a liner is provided and is often retained within the drawer by the bolts which hold the drawer handle onto the front of the drawer. Refer-

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ence is made to the liner merely because, if one is provided it should be removed, since the channel-shaped retainer forming a part of the attachment to be added to the drawer should underlie the drawer front top channel 47.

After the drawer handle and the drawer front inner liner, if any, are removed the channel-shaped retainer, which consists of the side plates 40 and 41 and the bridging plate 42, is positioned within the drawer so that the bridging plate 42 abuts against the inner surface of the drawer front 50 and also abuts against the drawer front top channel 47. Thus, the bridge plate 42 and portions of the side plates 40 and 41, including the side plate front flange such as flange 45, underlie the drawer front top channel 47. The side plates 40 and 41 are detachably connected to the sides of the drawer and drawer slides by means such as bolts 48 and 49 thus firmly retaining the channel-shaped retainer within the drawer and against the front interior portion thereof. For convenience of description I refer to this positioning as nesting the channel-shaped retainer against the front interior portion of the drawer.

The platform 11 and its supporting brace 29 are then placed against the drawer front 50 so that straps 27 and 28 overlie the drawer front top channel 47 and flange 52 of the bridging plate 42 to allow means such as bolts 53 and 54 to secure the strap members to the flange 52. Also, the positioning is such that the threaded openings in nuts 36 and 37 are in line with the openings in the drawer front 50, the bridging plate 42 and the channel stiffener 55 to allow means such as bolt 56 to be passed through these openings and threaded into nuts 36 and 37 to fasten the platform brace 29 securely against the drawer front 50. Sliding of the drawer partially out of the desk allows access to the inner ends of bolts 48 and 49 so that nuts and lock-washers may be placed thereon and tightened securely. To avoid scratching of this drawer front, the portions of the brace 29 and the platform 11 which would tend to contact the drawer front have a thin rubber facing strip thereon which bears directly against the drawer front.

When the drawer attachment is assembled as thus indicated, the platform 11 extends forwardly of the drawer, being substantially flush with the drawer front top channel 47 and is centered so that it extends across the drawer front and beyond each drawer side. The length and width of the platform 11 are optional, of course, but I find the proportions indicated in Fig. 3 to be satisfactory. The platform 11 including the brace 29 is detachably fastened by bolts 53, 54, and 56 to the drawer inner liner made up of channel 55, end plate 42, and the two gusset plates 40 and 41, the latter two of which are in turn detachably fastened by bolts 48 and 49 to the drawer guides 57, meshed with drawer guide track 58, supported by the desk frame through attachment to Z-bars 67 and 68 making up a portion of said desk frame. Thus platform 11, together with any load that may be placed thereon, such as from the carrying of a typewriter or the like, is firmly supported from the desk frame. Since the load is primarily carried by the aforesaid supporting members, only a minor portion of the load is transmitted to the drawer and the latter, if of light construction, will not become distorted from over-stressing. There is sufficient clearance between the drawer front top channel 47 and the top

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of the drawer opening in the desk so that the drawer can be effectively closed even though straps 27 and 28 overlie the channel 47.

To restrain the drawer against outward movement or tilting in the drawer guide tracks when the typewriter supporting attachment is connected thereto and the drawer is closed, means are provided to clamp the drawer guides against the guide tracks therefor and thus prevent relative movement between these parts. Such a means is illustrated in Figs. 4 and 6 where are shown a drawer guide 57 mounted on a drawer side 65, a guide track 59 along which the drawer guide 57 travels and a clamp 59. The guide track 59 has an opening 60 therein through which extends an arm 61 of the clamp 59. Another arm 62 of the clamp 59 extends beneath the guide track 59 and a screw 63 is threaded through the arm 62 and abuts against the bottom surface 64 of guide track 59. The arm 61 of clamp 59 is shaped so that it bears against a portion of drawer guide 57, as is illustrated in Fig. 6, and hence when the screw 63 is tightened the arm 61 will force the drawer guide against the bottom portion 64 of the guide track to prevent movement of the drawer guide along the guide track and also to prevent the drawer from tilting. Preferably, such a clamping means is applied at both sides of the drawer. The clamp 59 can be easily applied by merely removing the drawers under the drawer to which the typewriter support is attached, and then reaching into the pedestal interior and up along the sides of the drawer to which the typewriter supporting attachment is attached until the guide track opening, such as opening 60, is located. There is sufficient space between the drawer guide tracks and the sides of the pedestal to enable the clamps to be applied as has been indicated. For example, in Fig. 3 it will be observed that the guide track 58 is spaced from the pedestal side 86 by the Z-bars 67 and 68.

In addition to the parts thus far enumerated, a shield can also be used in connection therewith, if desired. Naturally, the shield, if extended to the floor surface or is provided with a leg as herein shown, will furnish additional support for the typewriter platform 11. Details of the shield are best obtained from Figs. 1, 2 and 7. Thus, in Fig. 2 it will be seen that the shield 14 has substantially the length of the platform 11 and has a vertical height substantially equal to the height of the pedestal body 10. The front edge 69 of the shield is tapered inwardly from its connection to the underside of the platform 11 to the bottom edge 70 of the shield. Likewise, the edge 71 of the shield follows the taper of the front of pedestal 10 and this shield edge abuts against the pedestal 10 adjacent the drawer openings. A strap retainer 72 is detachably connectable to the pedestal 10 to hold the edge 71 firmly against the pedestal. From Fig. 7 it will be observed that the shield 14 is a hollow panel construction having spaced face panels 73 and 74.

The foot member 15 extends between the face panels 73 and 74, and through the shield bottom 70. At its point of contact with the floor surface the foot member 15 is provided with a rubber cap 75. Foot member 15 is adjustable vertically by virtue of its threaded connection to a retainer channel supported between face plates 73 and 74. Thus, the threaded extension 76 is threaded through channel plate 77 so that when the foot member 15 is turned it will be raised or lowered with respect to the bottom surface 70 of the

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shield. Of course the foot member extends through this bottom surface 70 without being gripped thereby. The face plates 73 and 74 are provided with flanges 78 and 79 which contain openings aligned with threaded openings in the bottom pan 19 of platform 11 so that the shield 14 can be detachably secured to the under surface of the platform 11 by means such as screws 89. The flanges 78 and 79 extend throughout the length of the shield 14 and abut against the underside of platform 11 throughout their length.

From the foregoing it will be seen that I have provided a readily attachable and detachable support for a typewriter or the like, which can be applied to a desk drawer. When the attachment is applied the desk drawer is converted into a suitable support for a typewriter or the like and the desk thus becomes useful for work involving typewriting or the like. The attachment firmly engages both sides of the drawer front and is securely fastened to the desk through connections to the drawer guides which mesh with the guide tracks on the desk. In addition, means are provided to prevent the drawer from moving or tilting when the attachment is in position and, if desired, a shield can be employed in connection with the rest of the attachment for greater support for the typewriter platform surface.

While I have described and illustrated an embodiment of my invention I wish it to be understood that I do not intend to be restricted thereto, but I intend to cover all modifications thereof which come within the spirit and scope of my invention.

I claim:

1. A drawer attachment for supporting a typewriter or the like comprising a platform extending forwardly of said drawer, a retainer shaped to conform to the front interior portion of said drawer and detachably connected thereto, means connected to said platform and said retainer and overlying the top of the drawer front and in contact therewith for anchoring said platform to said drawer, and a brace connected to said platform and detachably connected to said retainer.

2. A drawer attachment for supporting a typewriter or the like comprising a platform positioned adjacent the top of said drawer and extending forwardly therefrom, said platform being of greater width than the drawer, a retainer shaped to conform to the front interior portion of said drawer and detachably connected thereto, means connected to said platform and said retainer and overlying the top of the drawer front and in contact therewith for anchoring said platform to said drawer, and a brace connected to said platform and detachably connected to said retainer.

3. A drawer attachment for supporting a typewriter or the like comprising a platform positioned adjacent the top of said drawer and extending forwardly therefrom, said platform being of greater width than the drawer, a retainer shaped to conform to the front interior portion of said drawer and detachably connected thereto, straps projecting from said platform and overlying the top of the drawer front and in contact therewith, said straps being connected to said retainer for anchoring said platform to said drawer, and a brace connected to said platform and detachably connected to the front of said drawer.

4. A drawer attachment for supporting a typewriter or the like comprising a platform positioned adjacent the top of said drawer and ex-

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tending forwardly therefrom, said platform being of greater width than the drawer, a retainer having side plates connected to the drawer sides inwardly of the front of said drawer, straps projecting from said platform and overlying the top of the drawer front and in contact therewith, said straps being connected to said retainer for anchoring said platform to said drawer, a brace connected to said platform, said brace having a portion substantially flush with the edge of the platform which is adjacent the drawer front, and means to detachably connect said portion of the brace to the front of the drawer.

5. A drawer attachment for supporting a typewriter or the like on a platform, a retainer having side plates attachable to the sides of the drawer inwardly of the front of said drawer, supporting means for said platform to overlie the drawer front and detachably engage said retainer, and means to detachably connect said supporting means to said drawer.

6. The combination with a desk having a drawer adjacent the top thereof, of a typewriter support connectable to said drawer, and comprising a platform extending forwardly of the drawer, means connected to said platform and overlying the top of the drawer front and in contact therewith, said means being connected to a channel-shaped retainer nested against the front interior portion of the drawer and detachably connected thereto for anchoring said platform to said drawer, and a brace connected to said platform and detachably connected to said retainer by a means passing through the front of said drawer so as to clamp said retainer and brace on opposite sides of said drawer front.

7. The combination with a drawer, of an attachment for supporting a typewriter or the like, said attachment comprising a platform extending forwardly of said drawer, a brace connected to the underside of said platform and also detachably connected to the drawer front, a channel-shaped retaining member nested against the front interior portion of said drawer, means overlying the drawer top and connecting said channel-shaped retaining member to the platform for anchoring said platform to said drawer, a shield connected to said platform and suspended therefrom, and a vertically adjustable leg member on said shield remote from said desk and providing floor support for said shield.

8. The combination with a drawer, of an attachment for supporting a typewriter or the like, said attachment comprising a platform positioned adjacent the top of the drawer front and extending forwardly therefrom, said platform being of greater width than the drawer, a brace connected to the underside of said platform and also detachably connected to the drawer front, a channel-shaped retaining member nested against the front interior portion of said drawer, means overlying the drawer front top and connecting said channel-shaped retaining member to the platform for anchoring said platform to said drawer, and a shield connected to said platform, said shield having a vertically adjustable leg member cooperating with said shield to maintain the horizontal disposition of said platform.

9. The combination with a drawer, of an attachment for supporting a typewriter or the like, said attachment comprising a platform extending forwardly of said drawer, a brace connected to the underside of said platform and also detachably connected to the drawer front, a channel-shaped retaining member nested against the

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front interior portion of said drawer, means overlying the drawer top and connecting said channel-shaped retaining member to the platform for anchoring said platform to said drawer, and a shield connected to said platform, said shield having a vertically adjustable leg support cooperating with the shield to maintain the horizontal disposition of said platform.

10. The combination with a desk having a drawer adjacent the top thereof, and having a platform supported on and extending forwardly of said drawer, of a shield perpendicular to said platform and connected thereto adjacent an edge thereof, said shield including an adjustable foot adapted to cooperate with said drawer to maintain the horizontal disposition of said platform, and means to connect the shield to the desk.

11. For use with a desk having a drawer mounted therein by means of drawer guides on the sides of the drawer which engage guide tracks attached to the desk, a support for a typewriter and the like including a platform, a load-carrying means positionable adjacent to the inner front of the drawer and along the inner sides thereof, and means to detachably connect the load-carrying means to said platform and to said drawer guides.

12. For use with a desk having a drawer mounted therein by means of drawer guides on the sides of the drawer which engage guide tracks attached to the desk, a support for typewriters and the like including a platform and brace, a front retaining member positionable adjacent to

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the inner side of the drawer front, and supporting members positionable adjacent to the inner sides of the drawer, said platform and brace being adapted to be detachably connected to said retaining member, said retaining member being connected to said supporting members, and said supporting members being adapted to be detachably connected to said drawer guides.

13. The combination with a desk having drawers mounted therein by means of drawer guides and guide rails, of a support for a typewriter or the like, load-carrying means formed to be positioned within the desk drawer against the sides thereof, and means for detachably connecting said support to said load-carrying means, and said load-carrying means being detachably connected to said drawer guides.

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