

Aug. 30, 1949.

J. W. PAXTON, ET AL

2,480,668

APPLIANCE SUPPORTING ATTACHMENT FOR DESKS

Filed Jan. 12, 1946

2 Sheets-Sheet 1

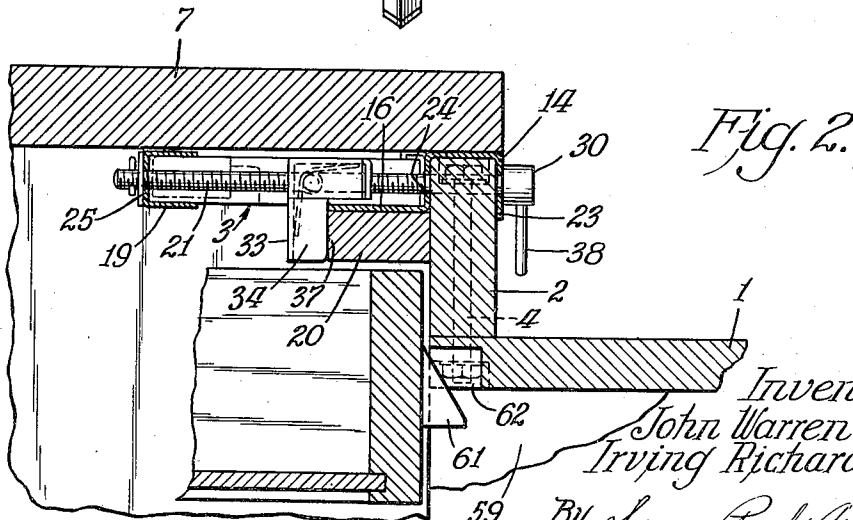
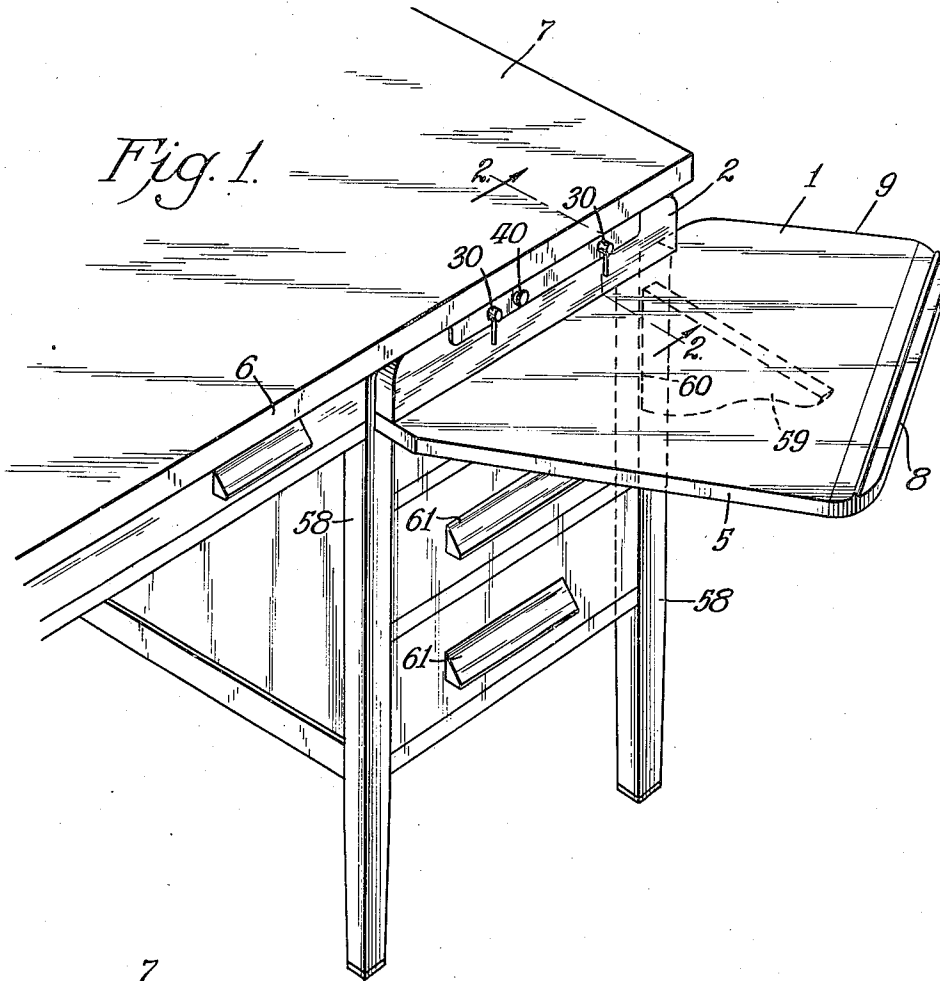


Fig. 2.

Inventors:
John Warren Paxton
Irving Richard Cornish

By *Loane, Bond & Anderson*
Attys.

Aug. 30, 1949.

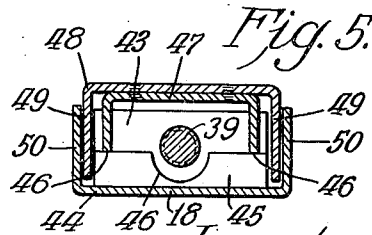
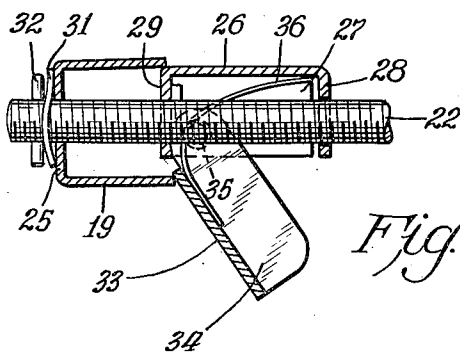
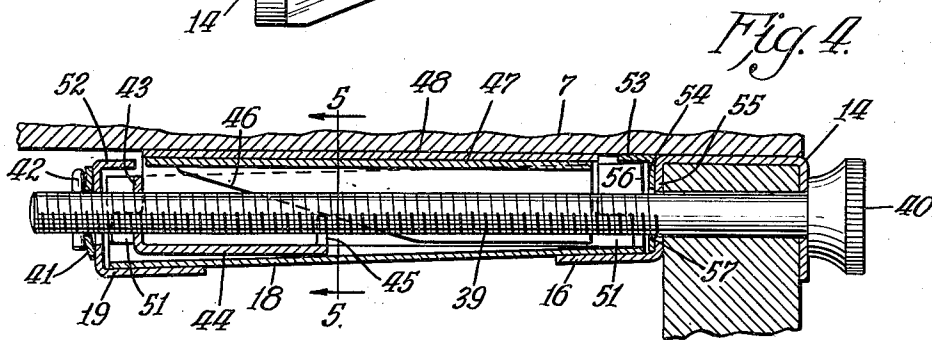
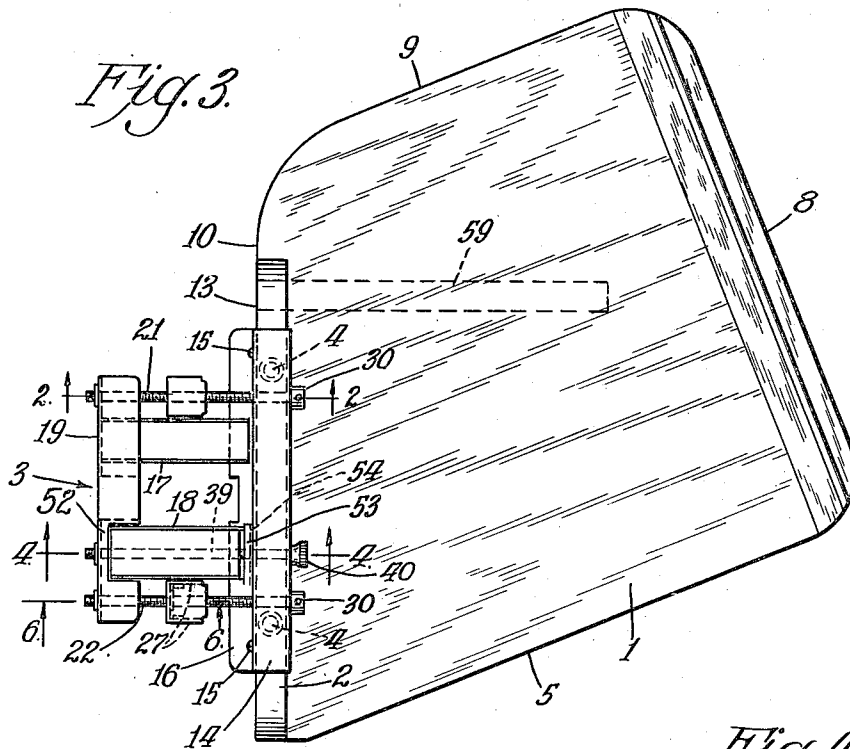
J. W. PAXTON ET AL

2,480,668

APPLIANCE SUPPORTING ATTACHMENT FOR DESKS

Filed Jan. 12, 1946

2 Sheets-Sheet 2



Inventors:
John Warren Paxton
Irving Richard Cornish
By Soans, Pond & Anderson
Attys.

UNITED STATES PATENT OFFICE

2,480,668

APPLIANCE SUPPORTING ATTACHMENT
FOR DESKSJohn Warren Paxton, Bloomington, and Irving
Richard Cornish, Elmhurst, Ill.

Application January 12, 1946, Serial No. 640,896

5 Claims. (Cl. 311-17)

1

This invention relates to an appliance supporting attachment for desks; for example, a typewriter supporting device designed to be attached to most standard office and other desks which are equipped with a slidable shelf immediately below the top of the desk.

The main objects of the invention are to provide a sturdy and rigid appliance supporting attachment, which may be rigidly secured to the desk; to provide an attachment of the character indicated, which may be readily attached and removed from the desk as required without the use of tools; to provide a construction which may be manufactured economically and at low cost and, in general, it is the object of the invention to provide an improved appliance supporting desk attachment of the character indicated.

Other objects and advantages of the invention will be understood by reference to the following specification and accompanying drawing wherein there is illustrated an attachment of the character indicated embodying a selected form of the invention.

In the drawings,

Fig. 1 is a perspective illustrating the attachment applied to a desk;

Fig. 2 is a section on the line 2-2 of Figs. 1 and 3;

Fig. 3 is a plan;

Fig. 4 is a section on the line 4-4 of Fig. 3;

Fig. 5 is a section on the line 5-5 of Fig. 4, and

Fig. 6 is a section on the line 6-6 of Fig. 3 but showing the parts in a changed position.

In the drawing the improved appliance supporting attachment is shown as comprising a shelf part 1, a riser 2 at the rear edge of the shelf part and mounting mechanism 3 extending rearwardly from the upper edge of said riser 2.

The riser 2 is rigidly secured to the rear marginal portion of the shelf 1 by suitable means which may include bolts 4, glue and other means. As shown, the shelf 1 is so cut that its inner edge 5 is disposed at an obtuse angle with reference to the central portion of the edge 6 of the top 7 of the desk on which the attachment is mounted. The edges 8 and 9 may respectively be perpendicular to and parallel with the edge 5, or in any other desired relationship thereto. The rear or inner edge 10 of the shelf is parallel and co-planar with the rear or inner face 13 of the riser 2.

The mounting mechanism 3 comprises an inverted channel shaped metal member 14 which snugly embraces the upper marginal portion of the riser 2. Said channel shaped member 14 is secured to the riser by means of a plurality of

2

wood screws, such as indicated at 15, which extend through the rear wall of the channel member 14 and into the riser. The rear wall of the channel shaped member is formed with a rearwardly extending flange 16 and a pair of channel shaped metal members 17 and 18 have their front ends seated on said flange 16 and welded or otherwise rigidly secured thereto. Another metal channel member 19 embraces the rear ends of the channels 17 and 18 and is welded or otherwise rigidly secured to said members 17 and 18 so as to form therewith a rearwardly extending frame or tail which is rigid with the riser 2 and shelf 1.

Said mounting frame has its maximum vertical dimension so formed that it may be inserted in the space normally occupied by a slidable shelf usually provided in desks of the type for which the attachment is designed. In Fig. 2 such sliding shelf space is provided between the under side of the desk top 7 and a cross member 20, which is a rigid part of the desk structure. The usual desk slide or shelf is removed and the mounting frame structure of the described attachment is inserted in the space between the cross member 20 and desk top in place of the removed slide.

For locking the attachment in place in the desk, we provide a pair of screws 21 and 22 which are rotatably supported in openings provided in the riser 2 and in the outer and inner flanges 23 and 24 of the channel member 14 and in the vertical wall 25 of the rear channel 19. On each of said screws 21 there is mounted a clamping device which consists of a rectangular inverted cup-like element 26 having depending side walls 27-27 and depending front and rear walls 28 and 29 respectively.

The screw 22 passes freely through an opening provided in the front wall 28 and it threadedly engages a suitably tapped opening in the rear wall 29 so that rotation of the screw will cause the member 26 to move forwardly or rearwardly of the screw dependent upon the direction in which the screw is rotated and the angle of the threads.

Each screw is anchored against longitudinal movement by its front end head 30 and by a washer 31 and cotter pin or the like 32 passed through the rear end portion of the screw. Hence, turning of the screw will cause movement of the member 26 inwardly or outwardly relative to cross member 20 of the desk.

Pivotaly attached to the member 26 is a transversely channel shaped element 33, the side

3

flanges 34 of which are pivoted as indicated at 35 to the side flanges 27 of the member 26. A light spring 36 wound around an inwardly projected portion of one of the pivots 35 so as to be anchored in place and arranged with its opposite ends respectively engaging walls of the members 26 and 33 serves to yieldingly urge the members 33 to swing from a nested position within its member 26 to a downwardly depending position, as shown in Fig. 2, wherein it is adapted to be brought into clamping engagement with the rear edge 37 of the cross member 20.

By turning the screw 21 or 22 sufficiently, the member 34 of the respective clamping devices will be caused to engage said cross member 20 and to thereby effect clamping of the riser 2 against the front face of the cross member 20. To facilitate such turning of the screws 21 and 22 their outer ends or heads 30 are provided with transverse rods 32 or, if desired, said heads may be provided with the usual screw head kerfs to permit turning of the screws by means of a conventional screw driver.

For removing the attachment it is, of course, necessary to get the members 33 out of the way and this is accomplished by turning the respective screws 21 and 22 in such a direction as to cause the members 26, which carry the clamps 33, to move rearwardly or inwardly into the space between the top and bottom flanges of the rear channel member 19. As shown in Fig. 6, such rearward movement will cause the pivoted members 33 to come into engagement with the bottom flange of the channel member 19 which will serve to rock the member 33 upwardly into the member 26. When the member 33 is so collapsed into the member 26 it offers no obstacle to removal of attachment from the desk. Rotation of the member 26 incident to turning of its adjusting screw 21 or 22, is prevented by engagement of one flat side of the member with the adjacent flat side of the adjacent member 17 or 18.

To further support the attachment rigidly in the desk, another screw 39 is journaled in the parts as explained above in respect of the screws 21 and 22. The front end of the screw 39 is provided with a suitable knob 40 by which it may be manually turned and the rear end of the screw is provided with a washer 41 and a cotter pin 42, or the like, whereby the screw 39 is locked against longitudinal movement relative to the attachment structure.

The screw 39 is located centrally of the width of the member 18 as shown in Figs. 3 and 4 and it threadedly engages a suitably tapped opening in the rear flange portion 43 of a rider 44 which has a narrow upwardly extending front flange 45 centrally recessed as shown at 46 to fit freely around the screw 39. The member 44 is a stiff metal stamping and the upper edge of its front flange 45 engages inclined cam edges 46 on the depending side flanges of a channel shaped element 47 which is rigidly secured by welding or otherwise to another inverted channel shaped member 48. The member 48 has depending side flanges 49-49 which fit closely within the upstanding side flanges 50-50 of the upwardly facing channel member 18 so that said member 48 is guided for vertical shifting movement between said flanges 50-50.

When the screw 39 is turned in the proper direction, the member 44 will be caused to travel lengthwise relative to the member 48 and relative to the cam edges 46 which are rigid with the member 48 whereby said member 48 will be cammed

4

upwardly relative to the tail structure of the device. By this means the member 48 is caused to bear against the under side of the desk top as clearly shown in Fig. 4. In Fig. 4 the element 48 is illustrated as having been adjusted upwardly to such an extent that the tail structure is caused to flex downwardly slightly thereby indicating that the member 48 bears with some pressure against the bottom of the desk. This is an exaggerated showing in Fig. 4 merely for purposes of illustration, and it should be understood that as a practical matter it is only necessary and desirable to adjust the member 44 to cause the element 48 to bear against the bottom of the desk top without deflecting the tail structure as indicated. It will, of course, be understood that the tail structure is sufficiently flexible to permit a small amount of flexing as indicated, without impairing the attachment and without causing the shelf portion thereof to rock upwardly at its outer end.

The side flanges 49 of the top wedging member 48 are provided with lower margin extensions 51-51 at its opposite ends, the extension 51 at the rear end extending beneath the upper horizontal flange 52 of the rear member 19. The front end projection 51 extends under a horizontal flange portion 53 which extends from a vertical plate 54, the latter being disposed between the inside flange 55 of the front frame member 14 and the forward or outer edges 56 of the side flanges 50-50 of the channel member 18.

The screw 39 passes through an opening 57 in the said plate 54 so as to anchor the same against displacement. The horizontal flange portions 52 and 53 cooperate with the ear extensions 51-51 to retain the wedge-like structure comprising the parts 48 and 47 against displacement. These parts may, however, be readily assembled and disassembled incident to removal of the screw 39 whereupon the plate 54 with its flange 53 may be withdrawn, thereby permitting upward and forward displacement of the members 48 and 47.

As shown best in Figs. 1 and 2, the shelf member 1 and the riser 2 are preferably of such width that they will overlap the usual leg posts 58-58 of the pedestal of a desk. A bracket element 59 is preferably provided on the under side of the shelf 1, being rigidly secured thereto by gluing and by wood screws, as indicated, or otherwise, and having a rear edge 60 adapted to engage the front or outer face of the leg 58 to thereby prevent downward sagging of the shelf at its outer end incident to any load placed thereon.

It has been found that as a practical matter the brace 59 may be secured in position when the device is fabricated, and that when properly positioned the attachment can be so positioned on most desks that the brace will engage one of the leg posts substantially as illustrated. It should be observed that the tail structure which is insertable into the slide space is considerably narrower than the usual slide so that there is some latitude as to the positioning of the shelf structure on the front of the desk; that is to say, the attachment may be adjusted sidewise within certain limits while maintaining the operative relationship between the various parts as explained.

The drawer fronts of most desks are equipped with drawer pulls, such as indicated at 61, which project outwardly from the drawer front. When these drawer pulls are made of wood and glued to the drawer front it is difficult to remove the drawer pull without defacing the drawer front.

5

In order to avoid interference from such projecting drawer front, the attachment may have a recess 62 provided therein (Fig. 2) to accommodate the projection of such drawer pull. In cases where the drawer is equipped with metal or other drawer pulls which are screwed or similarly detachably secured to the drawer front, the pull may be removed and placed in the inside of the drawer for storage. However, when the recess 62 is provided it will not generally be necessary to remove even the types of metal drawer pulls which are usually employed on desks. This arrangement permits the top drawer of the usual pedestal drawers to remain in the desk although it will, of course, be understood that the drawer is locked in closed position by the overlapping portions of the riser 2 and shelf 1. The drawers below the top drawer may be used in the usual manner.

The angular arrangement of the shelf 1 facilitates access to the remaining usable drawers in the pedestal on which the attachment is mounted, and it also provides adequate room for the user of the desk and the attachment to swing around from the desk to working position in relation to the attachment.

Various changes in the described construction may be made without departing from the invention.

We claim:

1. An attachment for supporting an office appliance on a desk having in its front an opening normally receiving a slidable desk part, the desk structure having parts which provide inwardly and outwardly facing abutments adjacent said opening, the attachment comprising a shelf member, a riser extending upwardly from the rear of said shelf, said shelf having rearwardly facing portions adapted to engage said outwardly facing abutments of the desk to position the shelf against the desk, and a mounting structure adapted to be inserted through said desk opening into the space normally occupied by said slidable desk part, said mounting structure comprising an element spaced rearwardly from said riser and having a forwardly facing channel-shaped part, means interconnecting said element and said riser, a screw rotatably supported in said element and in said riser and accessible from the outside of the structure when mounted on the desk for permitting rotation thereof, and a clamping device adapted to engage said inwardly facing abutment, said clamping device comprising a member having a threaded opening threadedly engaging said screw so as to be movable forwardly and rearwardly along said screw as an incident to rotation of the latter, and an element pivoted to said member so as to be movable from a collapsed position relative to the member to an extended position, said clamping means, when in collapsed condition, having a vertical dimension which will readily fit within said channel-shaped part and also readily pass through said desk opening and which, when in extended position, is greater than the corresponding dimension of said opening, said channel-shaped part and clamping means with its pivoted element in extended position, being movable rearwardly into said forwardly facing channel portion to thereby effect collapsing of said clamping means to permit passage of said clamping means and mounting structure through said opening.

2. A shelf attachment for a desk which is normally equipped with a sliding member and a part which supports such member and provides

6

an abutment which faces rearwardly of the desk, said attachment comprising a shelf, a riser extending upwardly from the rear edge of said shelf, and a mounting structure extending rearwardly from the upper margin of said riser and adapted to fit within the desk space normally occupied by said sliding member, said mounting structure embodying a member spaced rearwardly from but fixedly attached to said riser, a screw rotatably supported in said riser and in said rearwardly spaced member, and a clamping device carried by said screw and embodying a rider having a threaded aperture threadedly engaged by said screw so as to be movable longitudinally thereof as an incident to rotation of the screw, and an element pivoted on said rider so as to be rockable from a collapsed position relative to said rider to an extended position relative thereto, said clamping device and said mounting structure having interengaging portions which serve to prevent rotation of said clamping device with said screw upon rotation of the latter, and said clamping device, with said element in extended position, being movable forwardly of the desk as an incident to rotation of said screw, into engagement with said rearwardly facing abutment to thereby clamp said riser against a forwardly facing surface portion of the desk, said clamping device, when in collapsed position, being freely movable into and out of said sliding shelf space past said sliding member supporting part.

3. A shelf attachment for a desk which is normally equipped with a sliding member and a part which supports such member and provides an abutment which faces rearwardly of the desk, said attachment comprising a shelf, a riser extending upwardly from the rear edge of said shelf, and a mounting structure extending rearwardly from the upper margin of said riser and adapted to fit within the desk space normally occupied by said sliding member, said mounting structure embodying a forwardly facing channel-shaped member spaced from and rigidly interconnected with said riser, said channel-shaped member being of a vertical dimension which will freely fit within the desk space normally occupied by said sliding member, a screw rotatably supported in said riser and said channel-shaped member, and a clamping device carried by said screw and embodying a rider having a threaded aperture threadedly engaged by said screw so as to be movable longitudinally thereof as an incident to rotation of the screw, and an element pivoted on said rider so as to be rockable from a collapsed position relative to said rider to an extended position relative thereto, said clamping device and said mounting structure having interengaging portions which serve to prevent rotation of said clamping device with said screw upon rotation of the latter, and said clamping device, with said element in extended position, being movable forwardly of the desk as an incident to rotation of said screw, into engagement with said rearwardly facing abutment to thereby clamp said riser against a forwardly facing surface portion of the desk, and being movable rearwardly into said channel-shaped portion, the arrangement being such that said pivoted element will be engaged by said channel-shaped portion and rocked to collapsed position relative to said rider as an incident to said rearward movement of the rider, thereby to facilitate insertion and withdrawal of said mounting structure into and out of said sliding shelf space.

4. An attachment for supporting an office appliance on a desk having in its front an opening normally receiving a slidable desk part, the desk structure having a part which overlies the space normally occupied by said slidable part, and parts which provide inwardly and outwardly facing abutments adjacent said opening, the attachment comprising a shelf member, a riser at the rear of said shelf member, and a mounting structure adapted to be inserted through said opening into said space, said mounting structure comprising a rear member spaced rearwardly from said riser, an upwardly facing channel member rigidly interconnecting said rear member to said riser, a screw rotatably supported in said rear member and riser and located in the channel of said upwardly facing channel member, a member threadedly engaged with said screw so as to be movable forwardly and rearwardly thereof as an incident to rotation of the screw, a pressure member overlying said screw-engaging member and anchored to said mounting structure against separation therefrom and movement lengthwise of said screw, and interengaging cam means carried by said screw-engaging and pressure member operative, as an incident to movement of said screw-engaging member along said screw, to effect upward movement of said pressure member into engagement with said desk part which overlies the space normally occupied by said slidable desk part.

5. An attachment for supporting an office appliance on a desk having in its front an opening normally receiving a slidable desk part, the desk structure having a part which overlies the space normally occupied by said slidable part, and parts which provide inwardly and outwardly facing abutments adjacent said opening, the attachment comprising a shelf member, a riser at the rear of said shelf member, and a mounting structure adapted to be inserted through said opening into said space, said mounting structure comprising a forwardly facing channel member spaced rearwardly from said riser, an upwardly facing channel member extending between and rigidly interconnecting said rearwardly spaced channel member to said riser, means carried by said mounting

structure and adjustable thereon into clamping engagement with said inwardly facing abutment to thereby clamp said riser against said outwardly facing abutment, and vertically adjustable means adapted to be adjusted into engagement with said overlying part of the desk structure, said vertically adjustable means comprising a screw rotatably supported in said rearwardly spaced member and riser and located in said upwardly facing channel member, a rider threadedly engaging said screw so as to be movable inwardly and outwardly of the mounting structure as an incident to rotation of the screw, said rider having a portion engaging the bottom of said upwardly facing channel member to thereby prevent rotation of said rider as an incident to rotation of the screw, and a pressure member vertically movably disposed within said upwardly facing channel member, said rider and pressure member having interengaging cam surfaces operative, as an incident to movement of said rider along said screw, to effect upward movement of said pressure member into engagement with said overlying desk part, ears extending endwise from the rear end of said pressure member into the channel of said forwardly facing channel member, ears extending forwardly from the forward end of said pressure member, and a retainer anchored to said screw and having a rearwardly projecting flange portion extending into overlying relation to said forwardly projecting ears, said ears and the respective overlying portions of said channel member and said retainer serving to prevent separation of said wedge from assembled relation to said rider while also permitting said upward movement of said pressure member.

JOHN WARREN PAXTON.
IRVING RICHARD CORNISH.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
570,311	Kidder	Oct. 27, 1896
2,401,181	Paxton et al.	May 28, 1946