Dec. 24, 1957 C. M. LEE 2,817,571

WALL ATTACHED FOLDING TABLE

Filed Dec. 18, 1956

2 Sheets-Sheet 1

Fig. 1

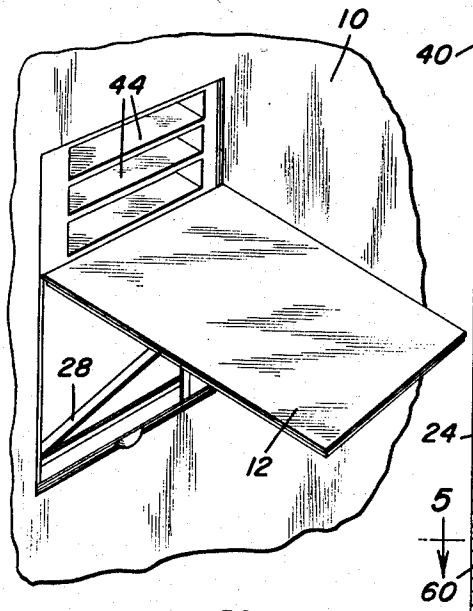


Fig. 3

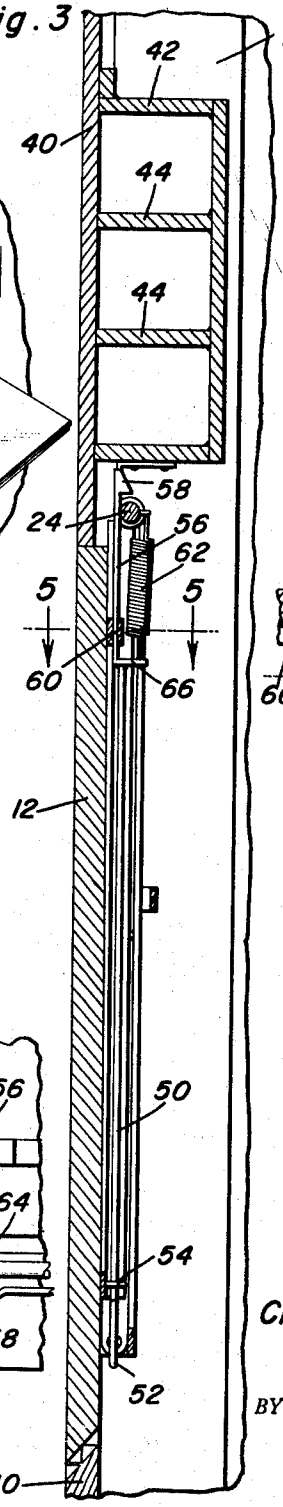


Fig. 2

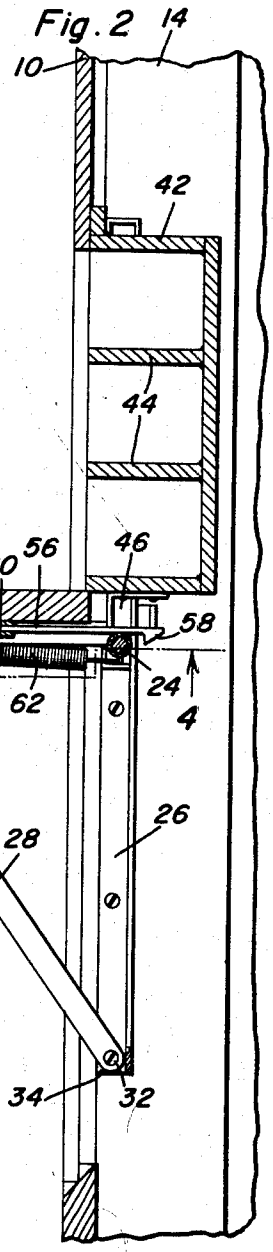


Fig. 5

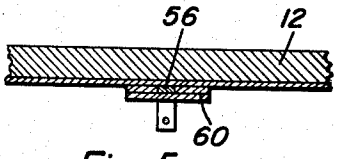
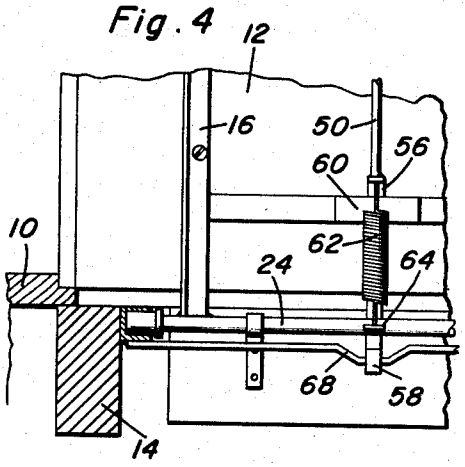


Fig. 4



Chester Marvin Lee
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

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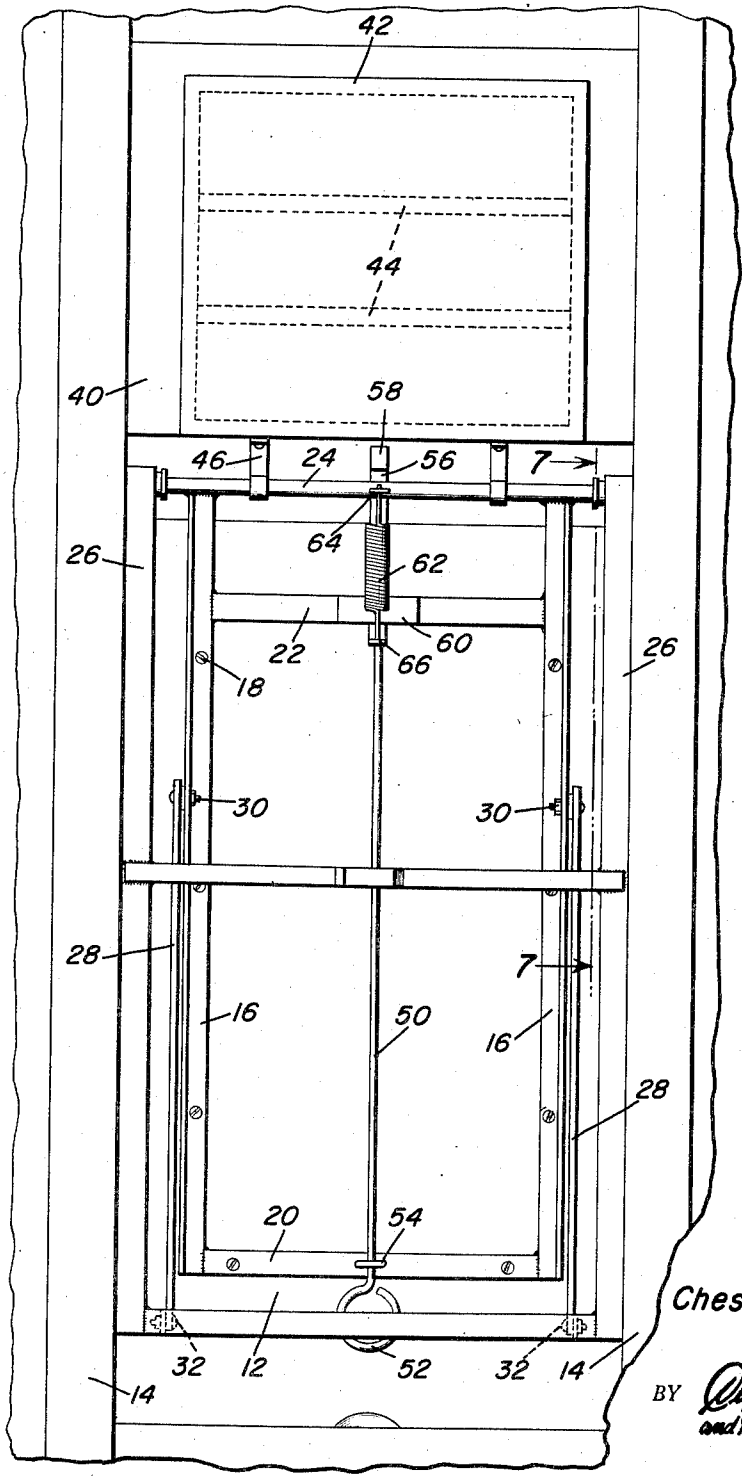
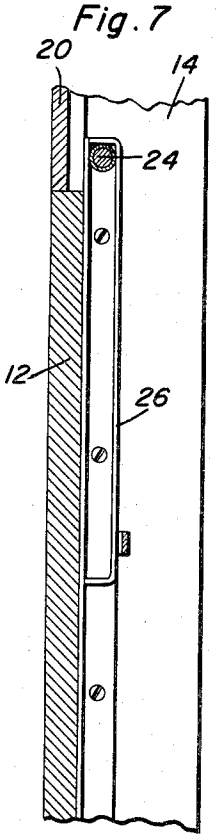


Fig. 6

Fig. 7



Chester Marvin Lee
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

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WALL ATTACHED FOLDING TABLE

Chester Marvin Lee, Smithville, Tex.

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5 Claims. (Cl. 312—313)

This invention comprises a novel and useful wall attached folding table and more particularly relates to a table, shelf or desk which may be compactly associated with and housed within a portion of a wall in an improved manner and may be selectively extended therefrom into an operative position.

The primary purpose of this invention is to provide a desk or shelf which shall be capable of being compactly housed and concealed in a wall between the studs thereof, and which may be easily extended therefrom into a position in condition for use.

A further object of the invention is to provide a desk or shelf in accordance with the foregoing object which shall be compactly formed and shall be capable of being pre-formed and installed as a unit into conventional walls.

A further object of the invention is to provide a wall desk or shelf construction wherein the panel forming the shelf or desk shall have a slidable section comprising a receptacle containing shelves, pigeonholes or drawers and which may be slid from a concealed position within the wall to an open, exposed and accessible position in response to moving the desk or shelf into its erected position.

A still further important object of the invention is to provide a desk or shelf construction which will have an improved sliding and connecting means for securing the same to a wall and will have an improved latch means associated therewith.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a fragmentary perspective view showing a portion of a wall having the desk or shelf in accordance with the present invention applied thereto and showing the same in its extended and erected position ready for use;

Figure 2 is a vertical sectional view taken upon an enlarged scale through a portion of a wall structure showing the manner in which the invention in accordance with Figure 1 is applied thereto, the parts being shown in the extended position of the device;

Figure 3 is a view similar to Figure 2 but upon a somewhat greater scale and showing the parts in the stored or closed position of the shelf or desk assembly;

Figures 4 and 5 are horizontal sectional detailed views taken substantially upon the planes indicated by the section lines 4—4 and 5—5 of Figures 2 and 3 respectively and showing certain structural details of the invention;

Figure 6 is a rear elevational view of the arrangement of Figure 3, and showing the position of the parts when the same are compactly folded into the wall with which they are associated; and

Figure 7 is an enlarged detailed view taken substantially upon the plane indicated by the section line 7—7 of Figure 6 and showing certain details of the slide and connecting means of the invention.

In Figure 1 there is shown a portion of a wall 10 in which the foldable shelf or desk assembly in accordance with this invention has been applied. It will be understood that the dimensions of this device are preferably such that the assembly may be readily positioned and secured between a pair of studs in a conventional wall structure, whereby the device may be readily applied to existing walls, although in some instances it may be built into the walls during their erection.

The foldable desk or shelf invention illustrated herein consists of a panel 12, which in the folded position of the device shown in Figure 1 is adapted to form a part of the exterior surface of the wall 10 to thereby completely close the opening through which the desk or shelf is to be extended when the device is not in use. As will be apparent from Figure 6, this shelf is adapted to be received between a pair of wall studs 14, the latter being also shown in Figures 2, 3 and 4.

Secured to what may be termed the under or inner side of the panel 12, which is adapted to form the horizontal surface of the desk or shelf in the extended position of the same, is a stationary support frame preferably comprising a pair of longitudinally extending, parallel angle-iron members 16, attached to the panel as by fastening screws 18. Transverse members 20 and 22 are welded or otherwise rigidly attached to the side frame members 16. At their inward or upper ends, the side frame members 16 are welded or otherwise rigidly secured to a transversely disposed rod 24 which projects laterally beyond the sides of the panel 12 and constitutes a slide for the panel and its supporting frame.

Operatively associated with the supporting frame carried by the panel 12 is a stationary frame which consists of a pair of channel-iron members 26 secured in a suitable manner to the studs 14. The opposite extremities of the slide 24 extend into the channel members 26 for sliding movement therein to thereby slidably retain the panel in the stationary frame member.

A pair of links 28 are terminally secured, as by fastening bolts 30, to the angle-iron members 16 of the movable frame and by further bolts 32 to upstanding lugs 34, see Figure 2, on the stationary frame member. Thus, the panel is pivoted for swinging movement at its mid-portion to the stationary frame member, while the inward or upper end of the panel is secured to the stationary frame member for sliding movement relative thereto.

Above the opening cut in the wall and into which the shelf 12 is adapted to fit and from which it is adapted to be extended is a panel member 40. Disposed behind this panel 40 is a cabinet or receptacle 42 having therein suitable shelves, partitions or pigeonholes 44.

At its lower end the receptacle 42 has hinge members 46 rigidly secured thereto and depending therefrom, which hinge members in turn are journaled upon the slide rod 24 as shown clearly in Figure 6. The arrangement is such that as the panel 12 is slid upwardly or downwardly, the slide rod 24 carried by the frame will also impart vertical sliding motion to the receptacle 42, thereby moving the receptacle upwardly behind the panel 40 into a concealed position shown in Figure 3 and indicated in Figure 6 or will lower the same into an open and exposed position as shown in Figures 1 and 2, whereby the cabinet or receptacle is ready for use and access may be had to its shelves 44.

As so far described it will thus be seen that the receptacle or cabinet 42 is pivotally connected to the panel 12, but is confined to a vertical straight line motion, whereas the upper end of the panel, being confined to the channel members 26, has also a vertical straight line motion. However, the rest of the panel has both a

vertical movement and a vertical swinging or tilting movement in a manner to be now described.

Extending along the underside or rear side of the panel 12 is a latch rod 50 having at its lower end a finger grip portion 52. This rod extends through a suitable guide member 54 carried by the cross member 20 of the movable frame assembly and at its upper end the rod has rigidly attached thereto a flat strip constituting a terminal member 56. This strip at its extremity is provided with a latch hook 58. The terminal member 56 in turn extends through a guide bracket 60, whereby the latch rod and the latch carried thereby are mounted for guided sliding movement upon the panel. A tension spring 62 has its ends attached to a lug 64 mounted upon the slide rod 24 and to an upstanding flange 66 on the terminal member 56 and by which the latter is secured to the extremity of the latch rod 50, as will be apparent from Figure 3. This spring thus serves to urge the latch rod and the latch upwardly or inwardly relative to the panel by which it is carried.

The arrangement is such that when the shelf has been pivoted about its slide rod 22 and extended perpendicular to the wall through the opening therein, the slide rod being thereby moved downwardly in the channel members 26, thus lowering the receptacle or cabinet 42 from its concealed to its exposed position, as will be seen by comparing Figures 3 and 2. The latch member is free to be moved by the spring so that the latch hook 58 will engage behind the slide rod 24 and will have a latching engagement with a keeper member 68. At this time the link 28 will be tilted into a position supporting the shelf 12 in a horizontal position, the latch thus retaining the parts in this position.

In order to release the latching engagement, it is merely necessary to grasp the finger ring 52, pull the latch against the resistance of the spring 62, thereby disengaging the latch hook and permitting the shelf 12 to be pivoted about the upper end of the links 28, while the links themselves pivot about their lower extremities to thus move the shelf upwardly and inwardly into the recess in the wall and thereby slide the cabinet 42 upwardly into concealed position.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A foldable wall desk comprising a stationary frame adapted to be secured in a wall opening between a pair of studs thereof, a panel comprising a closure for said wall opening and adapted to be movable therethrough to a horizontal position, said stationary frame including track members, said panel having at one end thereof a transverse slide rod pivoted to said panel and slidably engaged with said track members, links having their ends pivoted to the mid-portion of the panel and to the stationary frame, a latch mechanism carried by said panel and engageable in the horizontal position of the latter with said stationary frame whereby to latch the panel in its erected horizontal position.

2. A foldable wall desk comprising a stationary frame adapted to be secured in a wall opening between a pair of studs thereof, a panel comprising a closure for said wall opening and adapted to be movable therethrough to a horizontal position, said stationary frame including track members, said panel having at one end thereof a transverse slide rod pivoted to said panel and slidably engaged with said track members, links having their ends pivoted to the mid-portion of the panel and to the stationary frame, a latch mechanism carried by said panel and engageable in the horizontal position of the latter with said stationary frame whereby to latch the panel in its erected horizontal position, a cabinet, means securing the cabinet to said panel for sliding movement of the cabinet between a raised and concealed position behind the wall above the wall opening when the panel is closed thereinto to a lowered position exposed in said opening when the panel is swung into said horizontal position.

3. The combination of claim 1 wherein said latch mechanism includes a latch rod, means mounting said latch rod upon the panel for slidable guided movement, a latch keeper carried by said stationary frame.

4. The combination of claim 1 wherein said stationary frame includes parallel channel members constituting said track members and adapted to be secured to adjacent studs, said slide rod having its ends slidably engaged and retained in said channel members.

5. A foldable wall desk comprising a stationary frame adapted to be secured in a wall opening between a pair of studs thereof, a panel comprising a closure for said wall opening and adapted to be movable therethrough to a horizontal position, said stationary frame including track members, said panel having at one end thereof a transverse slide rod pivoted to said panel and slidably engaged with said track members, links having their ends pivoted to the mid-portion of the panel and to the stationary frame, a latch mechanism carried by said panel and engageable in the horizontal position of the latter with said stationary frame whereby to latch the panel in its erected horizontal position, a cabinet, means securing the cabinet to said panel for sliding movement of the cabinet between a raised and concealed position behind the wall above the wall opening when the panel is closed thereinto to a lowered position exposed in said opening when the panel is swung into said horizontal position, a spring secured to said latch rod and to said slide rod for yieldingly urging said latch rod towards latch engaging position.

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