United States Patent

[11] 3,574,434

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[21] Appl. No. **775,267**
[22] Filed **Nov. 13, 1968**
[45] Patented **Apr. 13, 1971**
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[54] **DESK WITH SLIDABLE TOP**
1 Claim, 6 Drawing Figs.

[52] **U.S. Cl.** **312/245,** 312/231
[51] **Int. Cl.** **A47f 5/08,** A47b 27/00
[50] **Field of Search** 312/184, 194, 231, 245, 246, 278, 280, 282, 301, 341, 348, 349

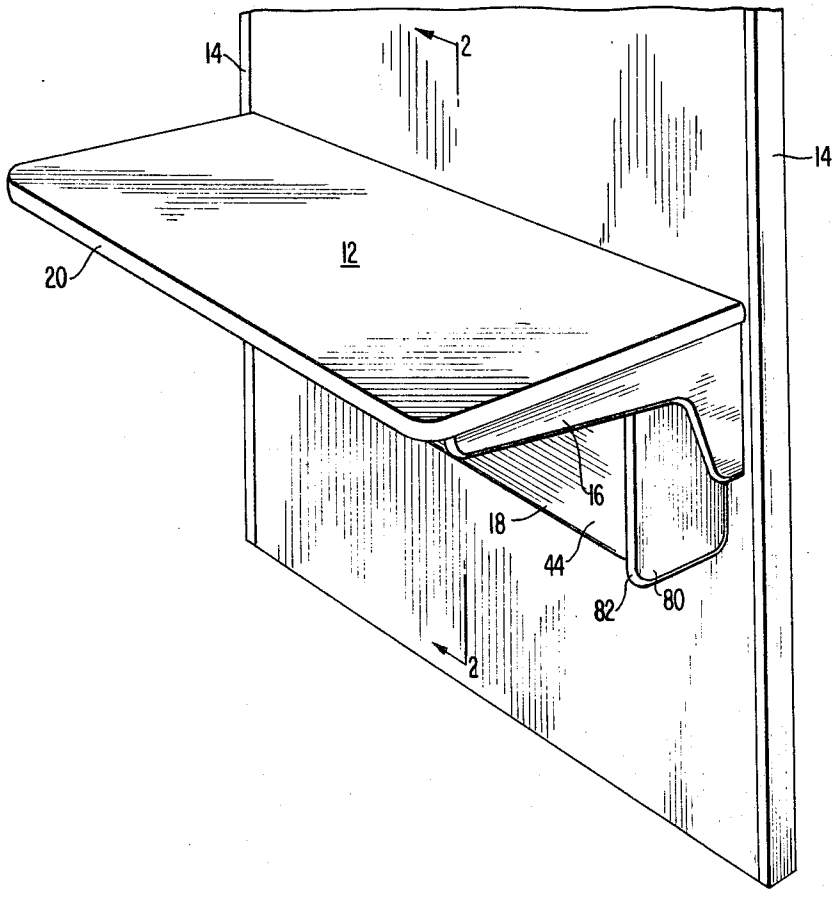
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ABSTRACT: This disclosure relates to a desk assembly in which a support such as wall hung brackets mounts an open top bin in a desk top. The desk top is slidably fixed to the support through opposing U-shaped channels having ball bearings therebetween. The bin is supported beneath the desk top so as to permit access thereto by sliding the top between alternate positions.



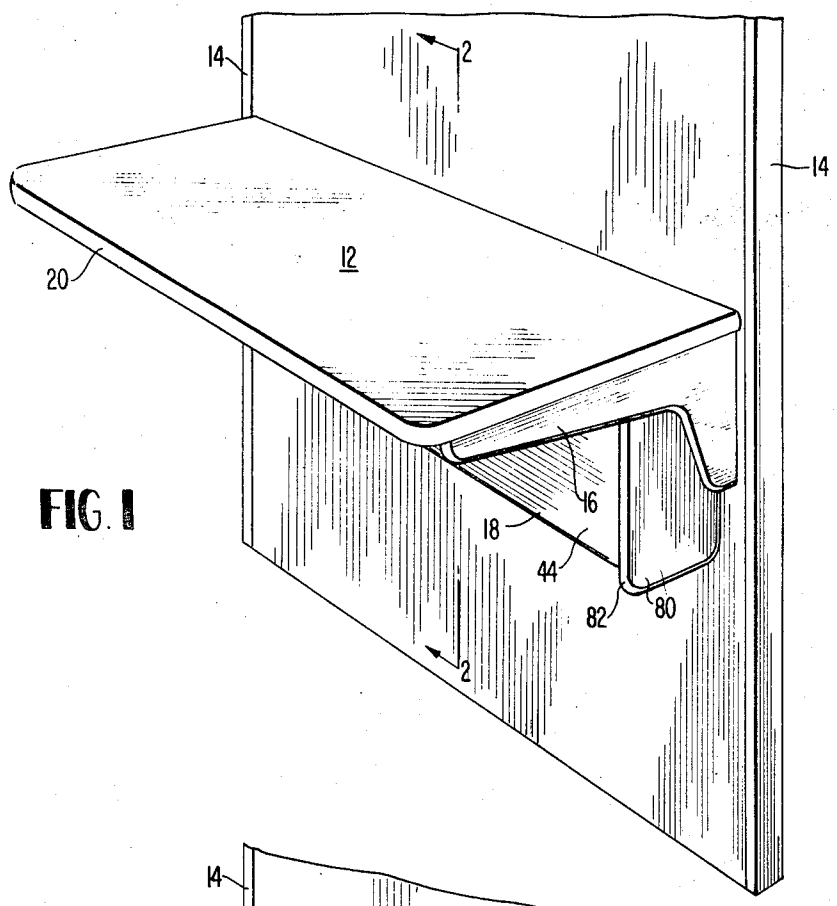


FIG. 1

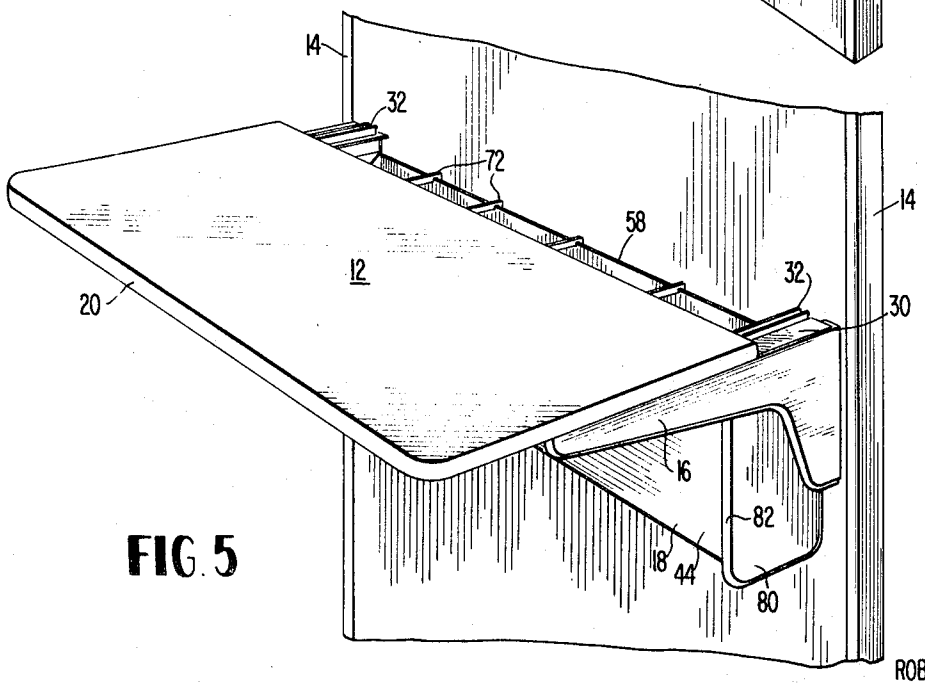


FIG. 5

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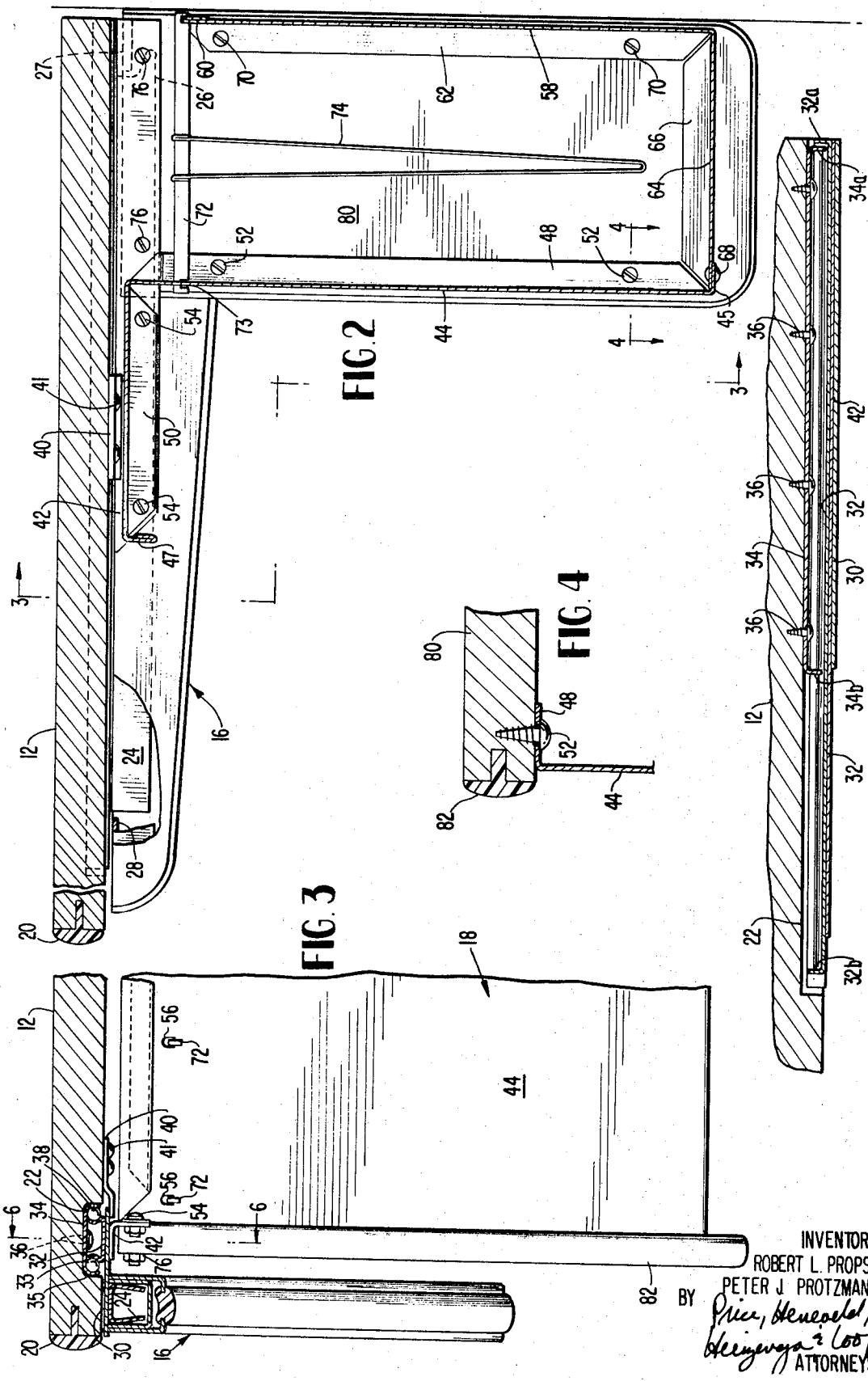


FIG. 2

FIG. 3

FIG. 4

FIG. 6

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DESK WITH SLIDABLE TOP

This invention relates to a furniture construction and more specifically to a desk. In one of its aspects, the invention relates to a desk construction in which the desk top member is slidable on a support.

In another of its aspects, the invention relates to a desk construction having an open top storage bin supported beneath a desk top which is slidable on a support relative to the bin so as to cover the bin in one position and to open the bin for access in a second position.

Cantilevered furniture has become a popular modern style. Most cantilevered units are hung from permanent or semipermanent wall structures.

In copending Ser. No. 736,857, filed Jun. 13, 1968, there is disclosed and claimed a bracket which can be used to support a desk in cantilevered fashion from a wall or semipermanent wall structure. The brackets can be supported by vertical channels in the wall structure, which channels have hanger member with slots for engaging clips. The brackets are attached to clips having slot engaging members through which the bracket is fixed to the hanger members. The channel-containing wall structure is described and claimed in copending Ser. No. 737,522, filed Jun. 17, 1968, which, with Ser. No. 736,857, filed Jun. 13, 1968, is incorporated herein by reference.

One problem with cantilevered desk tops is that of providing storage for files and the like. If the files are mounted in conventional manner along side of the desk, the appearance is not as pleasing.

I have now discovered that storage units can be attractively incorporated into cantilevered desk structures by mounting an open top storage bin between the brackets at a back portion thereof and providing slide means between the desk top and the bracket support for access to the storage bin.

By various aspects of this invention, one or more of the following, or other objects, can be obtained.

It is an object of this invention to provide a cantilevered furniture construction with a storage bin incorporated as a favorable design feature.

It is a further object of this invention to provide a desk construction in which access to storage is provided by sliding the desk top on the support.

It is a further object of this invention to provide a desk construction with a slidable top, in which construction and efficient slide is concealed within the top.

Other aspects, objects, and the several advantages of this invention are apparent to one skilled in the art from a study of this disclosure, the drawings, and the appended claims.

According to the invention, there is provided a desk construction in which a desk top is slidably supported by a support means. Preferably, a bin, having an open top, is supported by the support means beneath the desk top and the desk top is slidable to cover the open bin in one position and slidable away from the open bin to permit access thereto in a second position. Slide means are fixed on the support. The desk top is fixed on the slide means. Preferably, at least a portion of the slide means is recessed within the bottom of the desk top and a desk slides in a front to back direction.

The slide means preferably comprises first and second U-shaped channels with the second U-shaped channel being in inverted relationship to the first. The U-shaped channels are sized so that one of the U-shaped channels fits within the other. Longitudinal grooves are formed in facing relationship in the sides of each U-shaped channel and bearing means are positioned within the groove through which bearing means the desk top is supported.

The invention will now be described with reference to the accompanying drawings in which:

FIG. 1 is a perspective view of a desk according to the invention;

FIG. 2 is a side elevational view in section taken along lines 2–2 of FIG. 1;

FIG. 3 is a partial view taken along lines 3–3 of FIG. 2;

FIG. 4 is a sectional view taken along line 4–4 of FIG. 3;

FIG. 5 is a perspective view like FIG. 1 showing the desk top pulled out to expose the top of the bin; and

FIG. 6 is a sectional view taken along lines 6–6 of FIG. 3.

Referring now to the drawings, a desk top **12** is supported by upright rails **14** and brackets **16**. The brackets **16** are fixed to the rails **14** which are attached to a wall or partition. The rails **14** and the brackets **16** have been described in copending Ser. Nos. 737,522, filed Jun. 17, 1968 and 736,857, filed Jun. 13, 1968 and will not be further described herein. The method of fixing the bracket **16** to the rails **14** is described in said copending Ser. No. 737,857. A bin **18** is supported beneath the desk top **12** at a top rear portion thereof. The bin **18** is exposed for access when the desk top is moved away from the wall and covered when the desk top is pushed close to the wall as illustrated in FIGS. **1** and **5**.

The desk top **12** has a molding **20** around the outer edge thereof and has recessed channels **22** in a bottom surface. The desk top is supported by the brackets **16** through a support channel bracket **24** which fits tightly within the bracket **16**. A hook **26** is formed on the rear edges of the support channel brackets **24** and slides beneath a horizontal bar **27** on the bracket **16** to retain the support channel **24** within the bracket **16**. A backplate **28**, fixed to the bracket **26**, is provided to prevent the support channel bracket **24** from sliding within the bracket **16**. This manner of supporting the channel bracket **24** within the bracket **16** has been described in more detail in said copending Ser. No. 736,857.

The desk top **12** is supported by the bracket **16** through a slide assembly which permits the desk top to slide away from and toward the wall. The slide assembly comprises a support plate **30**, which is welded to the support channel bracket **24**, an inner channel **32**, welded to the support plate **30**, and an inverted channel **34**, which is fixed to the desk top **12** through screws **36**. The inner channel **32** has outwardly facing longitudinal grooves **33** formed in the sidewall. The inverted channel **34** has downwardly extending legs **35** forming inwardly directed longitudinal grooves. Ball bearings **38** are positioned within the grooves formed in the channels **32** and **34**. The desk top is therefore supported through the ball bearings and is slidable by means of the ball bearings. A transfer plate **40** is fixed to the desk top **12** through screws **41** and is positioned at an outer edge beneath the support plate **30** in sliding relationship thereto. As seen in FIG. **6**, the channel **32** is longer than channel **34** and has upwardly bent ends **32***a* and **32***b*. The channel **34** has downwardly bent ends **34***a* and **34***b* which strike ends **32***a* and **34***b* as the slide reaches the ends of the movement in each direction. The combination of ends **32***a*, **32***b*, **34***a* and **34***b* forms stop means for the slide.

An angle bar support **42** is fixed to the support plate **30** for supporting the bin **18**.

The bin **18** comprises a front panel member **44**, a back panel member **58**, and end panel members **80**. The back panel member **44** has a horizontal bottom flange **45** and a forwardly extending top portion **46** which is bent downwardly at **47** at a front portion thereof. Rearwardly extending flanges **48** are formed at the side of the front panel member **44** and downwardly directed flanges **50** are formed at the sides of the forwardly extending top portion **46**. Elongated holes **56** are provided at the top portion of the front panel member **44**.

The back panel member **58** is bent over at a top portion **60** and contains a forwardly directed flange **52** at the sides thereof. A forwardly directed bottom portion **64** of the back panel **58** forms the bottom of the bin. Upwardly directed flanges **66** are formed at the sides of the bottom portion **64**.

The end panels **80** comprises solid core panels having a molding strip **82** around the outside edge.

The front panel member **44** is bolted to the angle bar support **42** through the downwardly directed flanges **50** and bolts **54**. The front panel member **44** is fixed to the end panels **80** through rearwardly directed flanges **48** and screws **52** which extend into the end panels **80** (FIG. **4**). The back panel **58** is fixed to the front panel member **44** through rivets **68** which clamp together the horizontal bottom flange **45** and the forwardly directed bottom portions **64**. The back panel **58** is

fixed to the end panel **80** through screws **70** which extend through flanges **62** and into the end panels **80**.

File support bars **72** having slots **73** are positioned at one end in the elongated holes **56** and at the other end on top of back panel **58**. Hanging file folders **74** are supported by the file support bars **72** in a conventional manner. For example, the hanging file folders **74** can have outwardly extending pins which extend over the top of the file support bars **72**.

Whereas the invention has been described with respect to a particular embodiment, it is to be understood that the invention can take other forms. For example, the brackets need not be fixed to rails but can be fixed through conventional means to a wall.

The invention thus provides a favorably designed cantilevered desk construction in which a storage bin is provided at a rear portion of the desk. The design is further enhanced by the recessed slide means between the desk top and its support.

Reasonable variation and modification are possible within the scope of the foregoing disclosure, the drawings, and the appended claims without departing from the spirit of the invention.

We claim:

1. A desk construction having a support means, a fixed vertical support member, a desk top slidably mounted on said support means and a storage element beneath said desk top, the improvement in said desk comprising: said support means having a pair of spaced brackets rigidly secured to said vertical support member; said storage element being an elongated frame forming a compartment open only at the top; said storage element being mounted on and suspended between said brackets in fixed position adjacent the vertical support member; a pair of tracks, one supported on each of said brackets; said desk top being a platform mounted on said tracks and movable thereon from a closed position over the open top of said storage element to an extended position extending beyond the ends of said brackets and cantilevered therefrom to expose the open top of said storage element; said tracks each having means between the desk top and the brackets holding said desk top parallel to the top of said brackets in both closed and extended positions under downwardly acting loads imposed thereon; said desk top forming the exposed top surface of said desk in both closed and extended positions.