Nov. 11, 1958 H. E. HUTZELMAN 2,860,025

DRAWER AND FILE LOCKING DEVICE

Filed Aug. 31, 1956 2 Sheets-Sheet 1

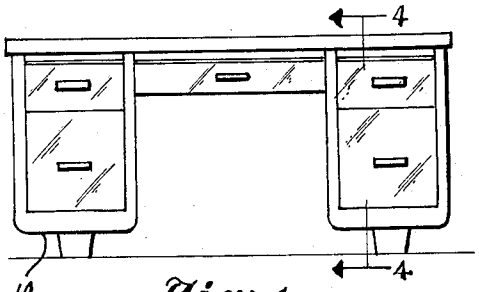


Fig. 1

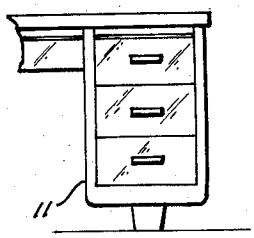


Fig. 2

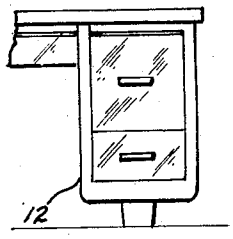


Fig. 3

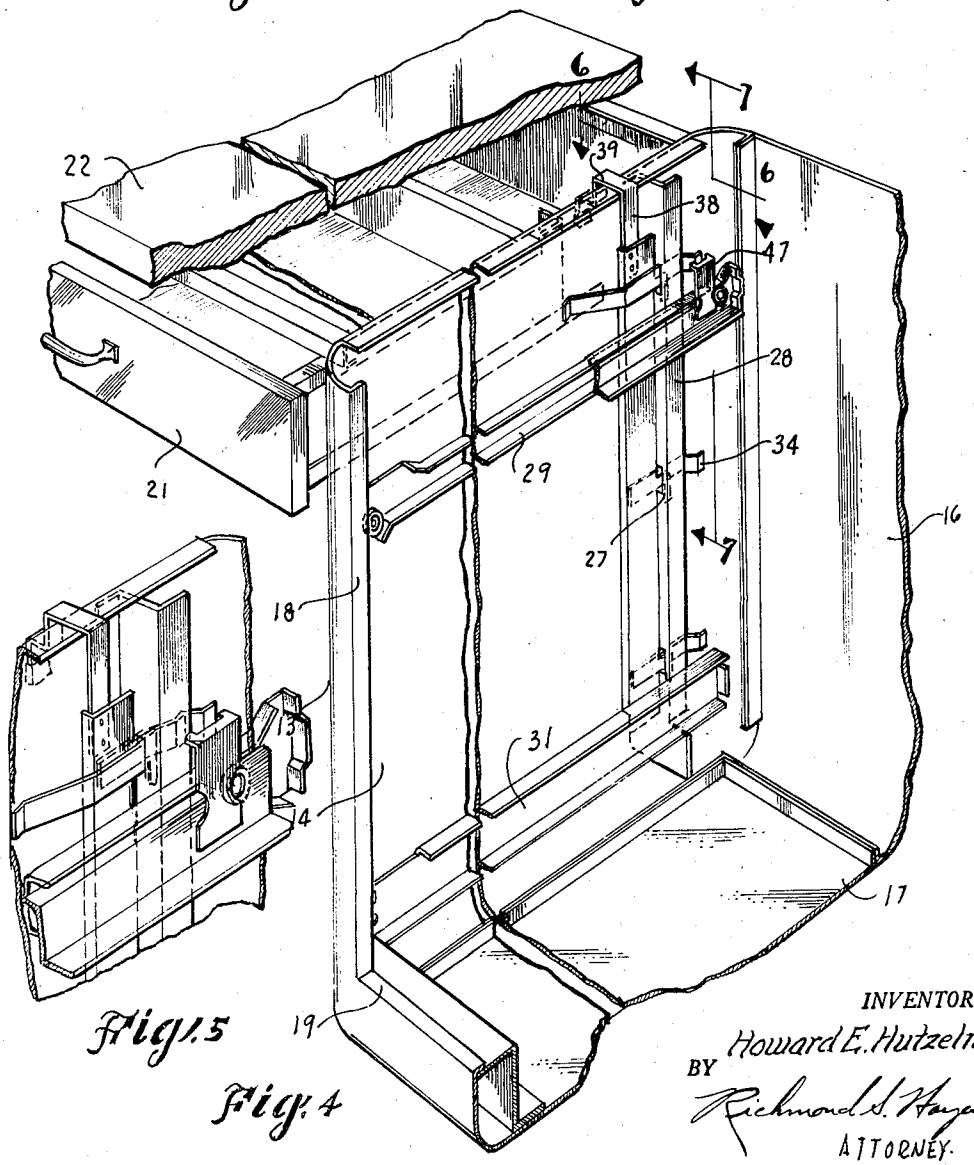


Fig. 5

Fig. 4

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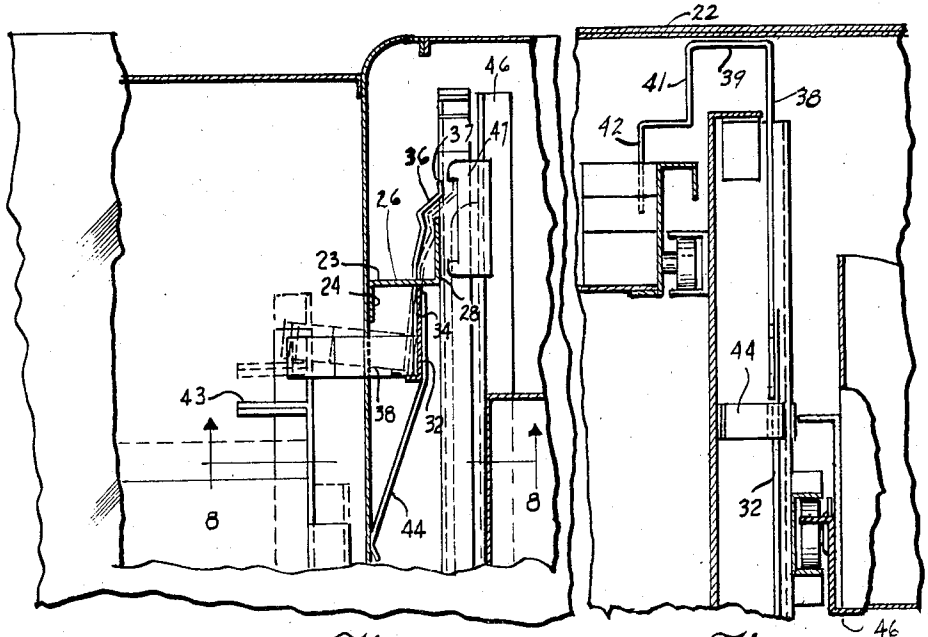


Fig 6 Fig 8

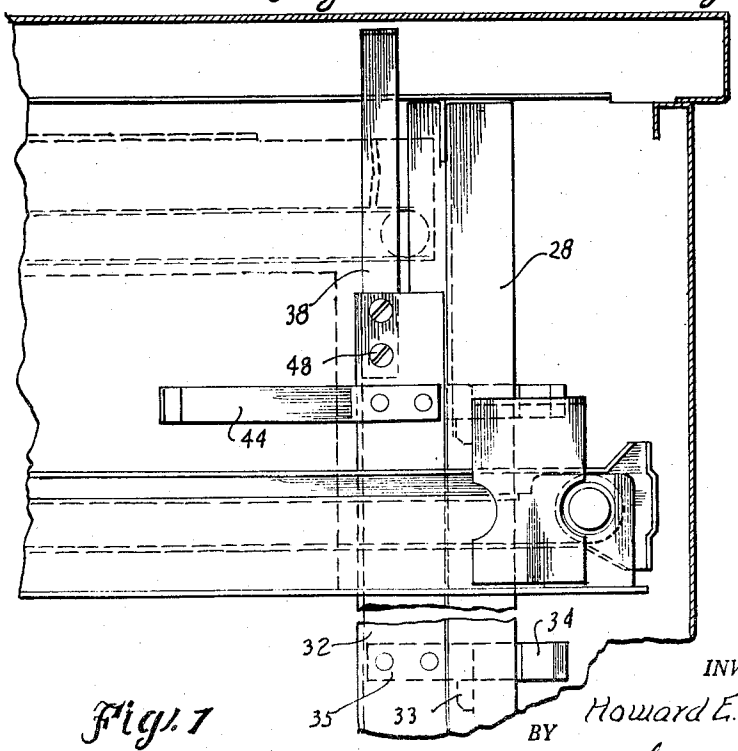


Fig. 7

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United States Patent Office 2,860,025 Patented Nov. 11, 1958

2,860,025

DRAWER AND FILE LOCKING DEVICE

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Application August 31, 1956, Serial No. 607,409

3 Claims. (Cl. 312—221)

This invention relates to locking devices and more particularly to such devices as applied to office furniture wherein it is desired to lock the drawers or files of desks or cabinets against unauthorized withdrawal.

Specifically, the invention discloses a locking device that is operable by the closing of a given drawer or file for the purpose of securing or locking other designated drawers or files in closed position. The present structure finds practical application to so-called pedestal desks wherein a central or knee-space drawer is provided with a key controlled lock and it is desired that the closing and locking of the knee-space drawer will automatically lock the drawers of either or both pedestals.

In the past, many different locking devices, of course, have been provided for this purpose, but in the instances with which I am familiar such devices have required the mounting of special brackets or other parts that normally are not needed in the manufacture and assembly of the ordinary pedestal desk. Thus, desks heretofore equipped with drawer locking mechanisms may be found to be somewhat troublesome to manufacture by reason of the extra parts that would not normally be needed in the manufacture and assembly of a pedestal desk not provided with a drawer locking device. The proper orienting of the supporting structure for such locking devices, as well as the manufacture and assembly of the parts of the devices themselves, to say nothing of the probable added cost and ultimate increased price to the consumer, suggests that these locking devices are not all to be desired and could be improved upon, at least in the manner and to the extent disclosed in the present invention.

It is a purpose and object of the present invention to provide a locking device for one or more drawers or files in a desk or cabinet that is of extremely simple construction and consists of relatively few, easily manufactured and assembled parts.

Another object of the invention lies in the provision of a locking device that is assembled as a separate unit and may be installed as such when it is desired to equip a desk or cabinet with means disclosed by the invention for securing one or more drawers or files in closed position.

A further object of the invention lies in the provision of a preassembled locking device that is insertable as a unit into a desk or cabinet without the aid of special tools, such installation being readily and easily accomplished at any time during or after completion of the assembly of the desk or cabinet.

Other objects and advantages of the invention will be more fully understood from a consideration of the following specification, taken in conjunction with the accompanying drawings in which:

Fig. 1 is a front elevational view of a two-pedestal desk in which drawer locking devices embodying the present invention may be installed;

Fig. 2 is a fragmentary front elevational view of a

desk wherein at least one pedestal includes three drawers that may be controlled by the instant locking device;

Fig. 3 is a further fragmentary front elevational view of a desk wherein the pedestal drawer arrangement, although different from that shown in Figs. 1 and 2, may also be controlled by the instant locking device;

Fig. 4 is a greatly enlarged fragmentary perspective view, partly in section, being taken substantially as suggested by the line 4—4 of Fig. 1, and shows in general the assembled relationship of the locking device with a desk pedestal;

Fig. 5 is an enlarged perspective view of one of the locking devices as mounted on the pedestal secured bracket, being shown substantially in the same general position as disclosed in Fig. 4;

Fig. 6 is an enlarged fragmentary horizontal sectional view, taken substantially on line 6—6 of Fig. 4, and shows the locking devices in inoperative position in solid lines and in operative position in dotted lines;

Fig. 7 is an enlarged fragmentary vertical view, partly in section, being taken substantially as suggested by the line 7—7 of Fig. 4, and shows the upper portion of the locking device; and

Fig. 8 is a vertical elevational view, partly in section, being taken substantially as indicated by the line 8—8 of Fig. 6.

Referring more particularly to the drawings, the reference numeral **10** is employed to generally designate a desk of the type to which the present invention is applicable. The desk **10**, as may be seen in Fig. 1, is of the two-pedestal type with a knee-space or center drawer, the drawers in the pedestals being of letter and box type. In Fig. 2, a single pedestal **11** is shown wherein three letter type drawers are provided. In Fig. 4, a pedestal **12** is shown in which box type and letter type drawers are shown in reverse arrangement to that shown in Fig. 1. The purpose of showing different arrangements of drawers in desk pedestals is solely to demonstrate the applicability of the present invention to the locking of different sizes and arrangements of pedestal drawers.

The fragmentary, perspective view (Fig. 4) shows a portion of a pedestal **13** that includes the usual inner wall **14**, rear wall **16**, and bottom wall **17**. The usual inturned side and bottom flanges **18** and **19**, respectively, define a front opening for the drawers. The space between the pedestals **13** is occupied by a center or knee-hole drawer **21**. This drawer is mounted for sliding movement in the conventional manner and the structure for this purpose is not shown inasmuch as it forms no part of the invention. Of course, the open tops of the pedestals and the spaces therebetween are enclosed by a desk top **22**.

Mounted adjacent the rear end of the inner pedestal wall **14** is an upstanding Z-shaped bracket **23**, having its short flange **24** welded or otherwise permanently joined to the pedestal wall. The central flange **26** that extends perpendicular to the pedestal wall is provided with three slots **27**, the number being related to the greatest number of drawers it is common to mount in a given pedestal. The general contour and arrangement of slots, together with the locking device carried thereby, are clearly shown in Fig. 5. The outermost flange **28** of the bracket **23** provides a surface to which a drawer carrying channel **29** may be attached at its innermost end. For purposes of description, it may be assumed that the pedestal **13** will contain an upper letter type drawer and a lower box type drawer, much as shown in Fig. 1. For this reason, the small channel **29** is shown to be uppermost and a larger channel **31**, in the lower portion of the pedestal.

The locking mechanism embodying the invention consists of what may be termed a locking bar **32**. Extending from the rearmost edge of the bar **32** are three vertically spaced hooks **33**. These hooks are so arranged that they may be projected into the openings **27** of the bracket **23** and serve to vertically support the bar and permit horizontal swinging movement thereof. In other words, they cooperate with the bracket to provide the equivalent of separable hinge supports. Attached to the bar **32**, at predetermined points, are locking hooks **34**. As may be observed in Figs. 5 and 6, each of these hooks includes a flat attaching portion **35** and an inclined portion **36** that terminates in a short flange **37**. The hooks extend beyond the bar **32** to an extent such that when the bar is swung through a horizontal plane about the hooks **33**, the locking hooks **34** will have predetermined lateral travel.

Attached to and extending upwardly from the upper end of the bar **32** is an arm **38**. This arm, as may be seen in Figs. 4 and 5, has a horizontal flange **39** that extends over the upper edge of the pedestal inner wall **14** and thence downwardly, as at **41**, and terminates in a laterally offset, vertical flange **42**. The flange **42** is in the path of a lug **43** that constitutes an extension of the rear of the center drawer **21**. Thus, movement of the drawer **21** from the position of Fig. 4 to a completely closed position, will cause lug **43** to engage flange **42** and swing the bar **32** about its pivot-like hooks, and this, of course, will cause lateral movement of the bar's locking hooks. In order that the locking bar and the locking hooks carried thereby will normally occupy an inoperative position, a restoring spring **44** is provided. One end of this spring is secured to the bar **32** and the other end contacts the inner face of the pedestal wall **14**. In this manner, the bar and locking hooks are normally yieldingly held in the position shown in full lines of Fig. 6.

The drawers, intended to be located in the pedestal and carried by the pedestal channels **29** and **31**, are provided with mounting strips **46** that extend rearwardly beyond the back of the drawer. Each of these strips mounts a keeper or locking lug **47** that has a laterally opening notch, substantially as shown in Fig. 6. The keeper **47** of each drawer is in the horizontal plane of the locking hooks **34** and, as will be more fully brought out, engagement of these parts serves to prevent withdrawal of a drawer.

Although the present locking mechanism is of extremely simple construction and, therefore, easily and inexpensively manufactured, it may occur that a pedestal desk may be manufactured and sold without the advantage of being able to lock all of the drawers closed and that the owner of a desk may subsequently wish to avail himself of the safety of being able to lock the drawers closed. To this end, the present invention is so designed that the arm **38** may be inserted between the desk top **22** and the upper edge of the inner pedestal wall **14**. The locking bar may, of course, be easily mounted by engaging the hooks **33** thereof with the slots **27**. Following this, the long end of the arm may be secured to the upper end of the bar **32** in any suitable manner, as by the screws **48** shown. The horizontal flange **39** of the arm is sufficiently close to the desk top **22** that the bar **32** may not become disengaged from the bracket **23**. Since there are no extra fittings, brackets, or other parts required other than the initial provision of the brackets **23** and slots **27**, it is evident that the present locking mechanism may be installed or removed at any time and with the aid of nothing more than a screw driver by way of a tool.

From the foregoing description of the locking mechanism, it will be apparent that as long as the central drawer **21** is in slightly opened position (Fig. 4) the rear lug **43** thereof will not contact flange **42** of arm **38** and the pivotal locking bar will therefore occupy the position shown in Fig. 6 by reason of the spring **44**. It is readily appreciated that when drawer **21** is completely closed, lug **43** has caused the locking bar to pivot about its supporting hooks **33**, thus swinging the locking hooks into the path of the drawer carried keepers **47**. If, as shown in Fig. 6, one or more of the pedestal drawers are in closed position, the keeper **47** will be engaged by the locking hook flange **37**. It will be noted that in this position the locking hook rests against the flange **28** of the bracket **23** and is thereby held rigid against any attempt to withdraw the drawer by endeavoring to buckle the locking hook through the application of force. The center drawer may, of course, be in fully closed position although one or more of the pedestal drawers are in partially opened position. The mere act of fully closing a pedestal drawer causes the rear edge of a keeper **47** to strike the inclined portion **36** of the locking hook **34**, flexing this portion of the hook to an extent to permit passage of the keeper. When the end of the locking hook registers with the notch in the keeper, the normal resiliency of the hook will cause it to engage the notch and prevent withdrawal of the drawer.

The locking bar, as disclosed, is equipped with three locking hooks **34** and these hooks are so located that they will lock three letter type drawers such, for example, as shown in Fig. 2. However, should a letter and box type drawer be mounted in the pedestal in the relationship shown in Fig. 1, only the top and bottommost locking hooks **34** would be effective, the intermediate locking hook being entirely clear of the drawer side or the drawer supporting channels. On the other hand, should the box type drawer be uppermost and a letter type drawer lowermost, as shown in Fig. 3, there would be no channel similar to channel **29** and the uppermost locking hook would not function.

From the foregoing it is evident that the present invention provides simple, efficient, and practical means for locking a variety of types of drawers in a desk pedestal or cabinet, and it will be appreciated that variations of the specifically shown and described structure may be made without in any way departing from the spirit and scope of the invention as set out in the annexed claims.

Having thus set forth my invention, what I claim as new and for which I desire protection by Letters Patent is:

1. A locking mechanism for securing the drawers of a desk pedestal in closed position by the closing of a drawer adjacent said pedestal, said mechanism comprising a vertically disposed bar, a bracket secured to the inner wall of said pedestal having a number of vertical slots, hooks on one edge of said bar engageable with said slots and providing for horizontal swinging of said bar, locking hooks extending from said bar edge, strips mounting said drawers for movement out of and into said pedestal, means carried by said strips located in a plane to be engaged by said locking hooks when said bar is swung into a given position, means yieldingly urging said bar into another position, and means forming a continuation of said bar located in the path of travel of said adjacent drawer, said last mentioned means being operable by said adjacent drawer to swing said bar to said given position and enable engagement of said locking hooks with said strip carried means.

2. A locking mechanism for securing the drawers of a desk pedestal in closed position by the closing of a drawer adjacent said pedestal, said mechanism comprising a vertically disposed bar, a bracket secured to the inner wall of said pedestal having a number of vertical slots, hooks on one edge of said bar engageable with said slots and providing for horizontal swinging of said bar, locking hooks extending from said bar edge, strips mounting said drawers for movement out of and into said pedestal, keepers on the rearwardly extending ends of said strips, said keepers being engageable with said locking hooks in a given position of said bar, a spring on said bar normally urging said bar into another position, an arm extending from said bar beyond the

confines of said pedestal, said arm being in the path of travel of said adjacent drawer and operable, upon the closing of said adjacent drawer, to swing said bar and cause said locking hooks to occupy a position to be engaged by said keepers when any of the drawers of said pedestal are moved into closed position.

3. In combination with a desk having a pedestal enclosing a plurality of drawers and a further drawer disposed adjacent thereto, a vertically disposed bracket secured to the inner wall of said pedestal having a number of vertical slots, a locking mechanism for securing the drawers of said pedestal in closed position by the closing of said further drawer, said mechanism comprising a vertically positioned bar adjacent said bracket, downwardly directed hooks on one edge of said bar, said hooks projecting through said slots and securing and supporting said bar for horizontal swinging movement with

respect to said bracket, locking hooks extending from said bar edge, keepers on the rear ends of said pedestal drawers located to be engaged by said locking hooks when said bar is swung into a given position, and means carried by said bar located in the path of travel of said further drawer, said meangs being operable to swing said bar about its hook support to enable engagement of said locking hooks with said keepers.

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