Nov. 5, 1963 C. R. WATTS ETAL 3,109,686

FILING CABINET DRAWER LATCH SELECTOR

Filed June 29, 1962

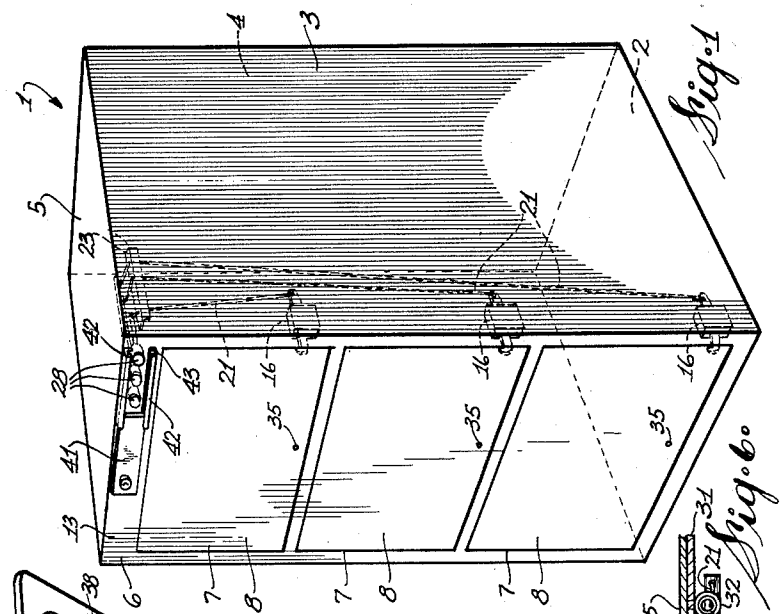


Fig. 1

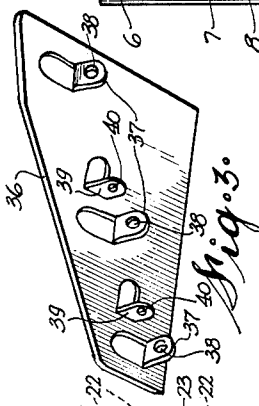


Fig. 3.

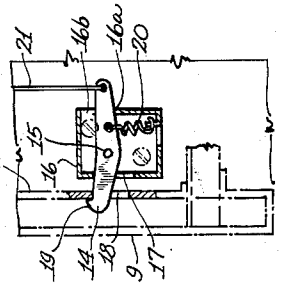


Fig. 4.

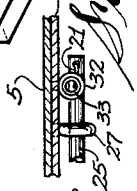
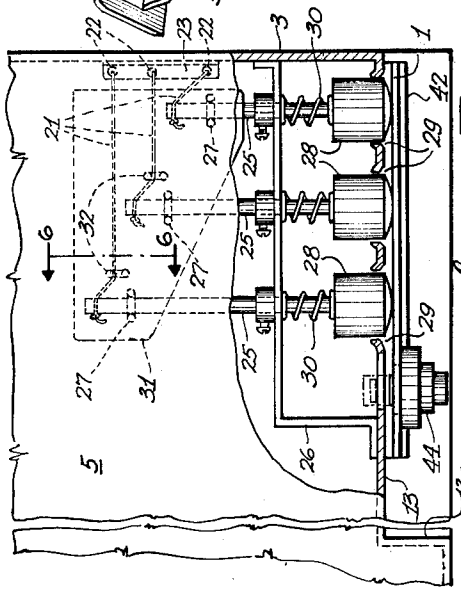


Fig. 5.

Fig. 6.



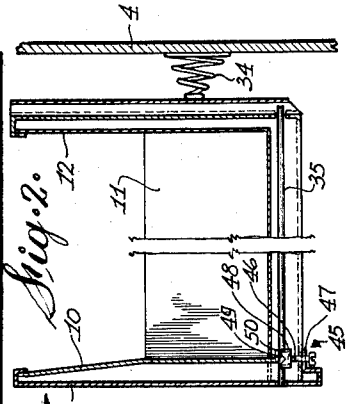


Fig. 2.

INVENTOR

Clarence R. Watts

Gordon A. Carson

BY

Harold A. Weir

PATENT AGENT

United States Patent Office 3,109,686 Patented Nov. 5, 1963

3,109,686

FILING CABINET DRAWER LATCH SELECTOR

Clarence R. Watts, 348 Crestview St., and Gordon A. Carson, R.R. 2, both of Ottawa, Ontario, Canada

Filed June 29, 1962, Ser. No. 206,479
2 Claims. (Cl. 312—215)

This invention relates to filing cabinets.

Cabinets for file folders of letter and foolscap sizes are in extremely widespread use. Such cabinets, as in present day use, include a latching device as well as a pull for each individual drawer of the cabinet. If a lock is required, separate locking means may be provided.

It is an object of this invention to provide a filing cabinet, which has a simplified drawer latching mechanism of reduced cost, greater effectiveness and increased convenience of operation, which has a simple drawer ejecting device eliminating the use of pulls, which may be readily and inexpensively provided with drawer locking means, which is of more compact form whereby it requires less storage and operational space, and which is of reduced overall cost.

These and other objects and advantages of the invention will be apparent from the following description with particular reference to the accompanying drawing, in which—

FIGURE 1 is a perspective view of a filing cabinet in accordance with the invention,

FIGURE 2 is a partial plan view, partly in section, of the cabinet,

FIGURE 3 is a perspective view of a modified form of latch mounting plate,

FIGURE 4 is a side elevation, partly in section, of a latch device,

FIGURE 5 is a sectional side elevation of a file drawer and associated portion of the cabinet, and

FIGURE 6 is a section on line 6—6 of FIGURE 2.

Referring to the drawings, the basic structural elements of the filing cabinet **1** may be manufactured in conventional form from standard materials such as sheet metal or the like. Thus, the cabinet comprises a base wall **2**, side walls **3**, a rear wall **4**, top wall **5**, and a forward wall **6** having openings **7** in each of which is mounted a drawer **8**. Drawer **8** is of basic conventional manufacture and has the usual forward wall **9** with inner spaced plate **10** fixed thereto, side walls **11**, and rear wall **12**.

The forward wall **6** of the cabinet has the usual top panel **13**.

The latch mechanism of the present invention comprises a latch bar **14** for each drawer **8**, such latch bar being pivotally mounted at **15** on one side wall **3**. The latch bar may be conveniently disposed within a housing **16** fixed to side wall **3**. The forward end of the latch bar projects through an opening **17** in the housing and through an opening or aperture **18** in the drawer plate **10** whereby the latch hook **19** may engage the edge of the aperture in the plate and thus retain the drawer in closed position as shown in FIGURE 4. Means urging the latch bar into drawer retaining or latching position comprises a spring **20** having one end connected to the housing **16** and its other end connected to the latch bar rearwardly of the pivot **15**. The spring **20** urges the rearward edge portion of latch bar **14** into engagement with the housing edge portion **16***a* which defines an opening **16***b* through which the rearward end of the latch bar projects.

Means for unlatching each latch bar comprises a flexible line **21**, such as a cable or the like, having one end connected to the rearward end of the latch bar. The line **21** is directed in an upward substantially perpendicular direction with respect to the latch bar through an eye **22** formed in a bracket **23** which may be fixed to the adjacent side wall **3**. Each eye **22** may be lined with a friction-reducing ring of a material such as glass, plastic composition, or the like.

The other end of each line **21** is connected to the inner end of a rod **25** slidably or reciprocally mounted in a bracket **26** fixed to the panel **13** of forward wall **6** and a second bracket **27** fixed to the top wall **5**. Each rod is provided with a head or push button **28** which projects through an aperture **29** in the panel **13**. Each rod is also biased into drawer latching position by a spring **30** interposed between bracket **26** and the inner end of the push button.

As shown, the push buttons **28** and rods **25** are transversely aligned. Thus, the buttons are arranged in a generally horizontal row in panel **13**. Preferably also, the buttons and rods are arranged closely adjacent the side wall **3** on which the described associated elements of the latch mechanism are disposed.

The brackets **27** may be conveniently formed on a mounting plate **31** which in turn is fixed to the top wall **5**.

In the modification shown, the eyes **22** are arranged in an aligned row in bracket **23**, such row being parallel and closely adjacent to the adjacent side wall **3**. The rods **25** are of different lengths roughly corresponding to the position of the respective eyes **22** whereby each of the shorter rods terminates forwardly of the line connecting the next adjacent longer rod with an eye **22**.

It will be apparent that each line **21** extends perpendicularly from a latch bar **14** and then angularly and in a normally horizontal plane (parallel to top wall **5**) to the end of a rod **25**.

Additional guide means, such as eyes **32**, for the lines may be provided.

It will be apparent that each eye **32** may also be lined with a friction-reducing or friction-resistant ring **33**. Furthermore, the bearing surfaces in contact with rods **25** may also be formed of or provided with any suitable friction-reducing material.

Means are provided for imparting a slight ejecting force to each drawer **8** when placed in unlatched condition, and comprises a plurality of springs **34** mounted on rear wall **4** and each in compressive engagement with the outer surface of rear wall **12** of a drawer **8** when in closed position.

It will be apparent that when it is desired to open any of the latched drawers **8**, one simply presses a respective one of buttons **28** which action unlatches the drawer, whereupon the associated spring **34** moves the drawer forwardly, say, one or two inches, to enable the operator to grasp the top edge of the forward wall **9** and move the drawer into desired open position.

It will be appreciated that the latching mechanism described does not require any increase in the general dimensions of the cabinet casing since the latch bars **14** and associated elements require a very small amount of lateral space (normally less than an inch) and may be readily accommodated in the normal clearance space in the cabinet at the sides of the drawers. Likewise, the push rods **25** and associated elements are located in the normal clearance space at the top of the cabinet and the conventional top panel **13** is of quite sufficient width to accommodate reception of the push buttons **28**.

Furthermore, a most important feature of the invention resides in the fact that drawer pulls are not required and therefore may be eliminated. As shown in FIGURE 2, the portion of panel **13** in which the push buttons are located is recessed at **13***a* to accommodate the locking mechanism whereby the cabinet front is completely free of protuberances, that is, it presents a flat, flush surface. To this end, moreover, the minor head portion of the conventional guide rod **35** is also eliminated. As shown in FIGURE 5, the rod **35** is releasably fixed in position by means of a clamp **45** which comprises a pin **46** screw-

threadedly mounted in a rearwardly extending flange 47 of forward wall 9. Pin 46 has a seat member 48 swivelly mounted thereon, such seat member having a plurality of notches 49 therein to receive a portion of rod 35 whereby the latter may be clamped between seat member 48 and a flanged edge 50 of plate 10. It will be apparent that the pin 46 may be screwed into and out of clamping position as desired.

FIGURE 3 illustrates a slightly modified form of mounting plate 36 which may be employed in lieu of plate 31. The plate 36 is illustrative of a very inexpensive type of support for rods 25 and lines 21. As shown, a plurality of ears 37 are struck out of the plate, each ear having an aperture 38 for reception of a rod 25. Adjacently positioned ears 39 are also struck out of the plate, each of such ears 39 having an aperture 40 for passage of a line 21.

A most important feature of the invention resides in the provision of cabinet locking means having a closely associated relation with the latching mechanism described. As shown, a locking plate 41 is slidably mounted in a pair of opposed tracks 42 mounted on panel 13, one immediately above and one immediately below the row of push buttons 28. Each track 42 has a groove 43 for reception of an edge portion of the locking plate. As shown in FIGURE 2, the locking plate 41 may be slid into overlying relation to the row of push buttons to fully conceal and enclose the heads of the buttons and render them inaccessible for unlatching actuation except upon retraction of the plate 41 to expose the push button heads. A lock 44 of conventional form is provided to lock the plate 41 in closed or button overlying position.

It will be apparent that the locking means described is not only susceptible of easy and low cost manufacture but it may be incorporated in the cabinet in a rapid, convenient, and inexpensive manner.

We claim:

1. In a filing cabinet having top, bottom, forward, rear, and side walls, and a plurality of drawers slidably mounted therein, each said drawer having a forward wall and a rear wall, said cabinet forward wall having openings for said drawers, a latching mechanism therefor

comprising a plurality of latch bars pivotally mounted on one of said cabinet side walls, each said latch bar being located in laterally opposed relation to one of said drawers, each said drawer having a portion engageable by one of said latch bars in the closed position of said drawer to retain it in said closed position, means releasably urging each said latch bar into latching position, and means for moving each said latch bar into unlatched position comprising a flexible line having one end connected to said latch bar, said cabinet forward wall having a recessed portion adjacent said cabinet top wall, a push rod slidably mounted in said recessed wall portion and having a head at one end thereof and its other end connected to the other end of said flexible line, said cabinet forward wall having apertures therein each receiving one of said push rod heads, said push rod heads being disposed in an aligned row having an axis parallel to said cabinet top wall, said push rod heads in all positions thereof being disposed inwardly of the plane of said cabinet forward wall, said push rods being varyingly spaced from said one side wall of said cabinet and being of gradually increased lengths, guide means for each of said flexible lines, and drawer ejecting means comprising a spring mounted on said cabinet rear wall in opposed disconnected relation to each of said drawer rear walls, each said spring being compressively engageable by one of said drawers in the closed position thereof.

2. Latching mechanism for a filing cabinet as defined in claim 1, and locking means for said drawers comprising a track disposed above and below said row, a locking plate slidably mounted in said tracks and being slidable into overlying relation to said push rod heads, and means for locking said locking plate in said overlying relation.

References Cited in the file of this patent

UNITED STATES PATENTS

1,676,971	Weaver	July 10, 1928
2,181,828	Ingwer et al.	Nov. 28, 1939
2,564,283	Schallert	Aug. 14, 1951
2,873,159	Becker	Feb. 10, 1959