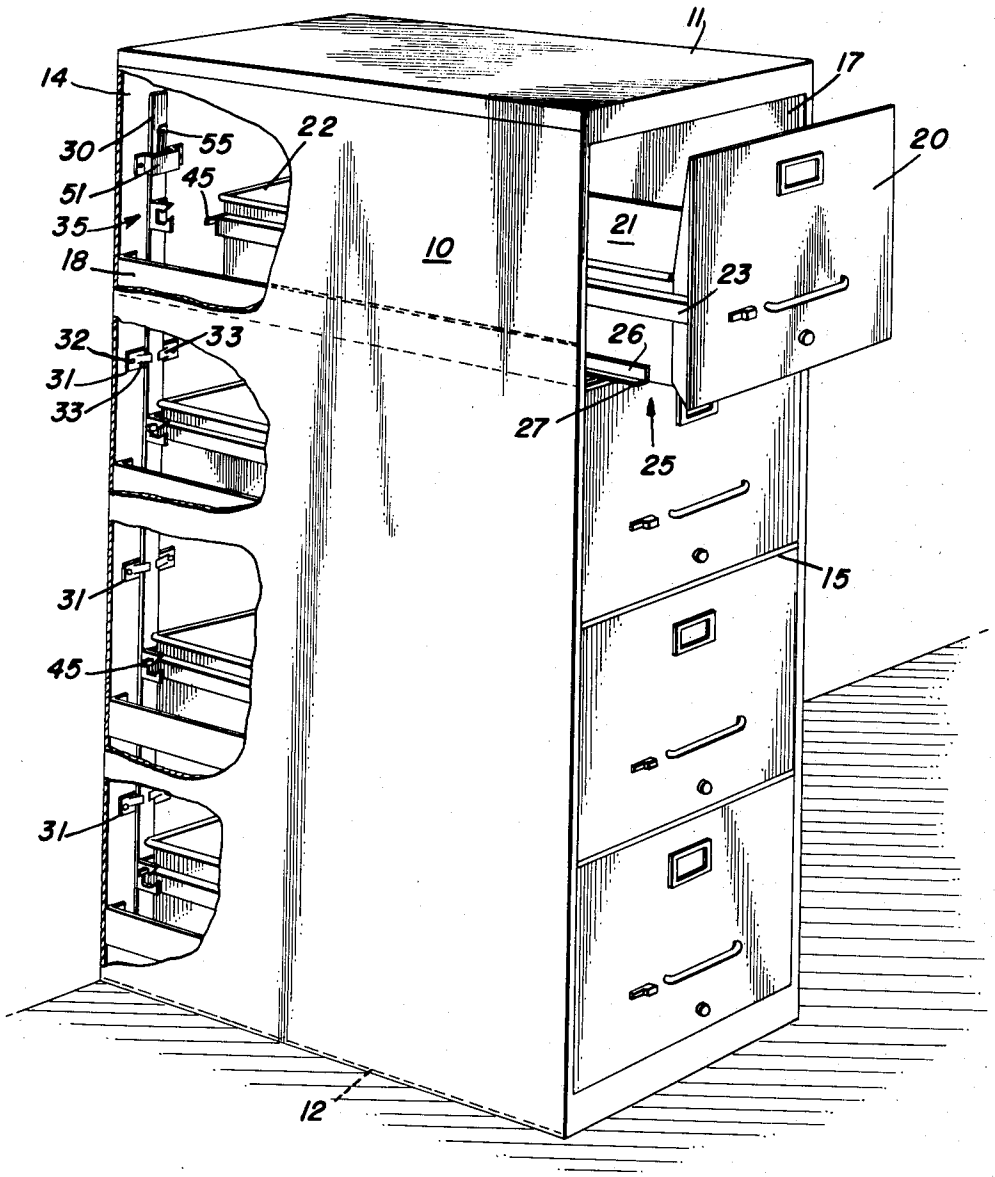
Oct. 4, 1955 J. E. ROBERTS 2,719,770

FILING CABINET

Filed Feb. 8, 1954 2 Sheets-Sheet 1

Fig. 1.



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Fig. 3.

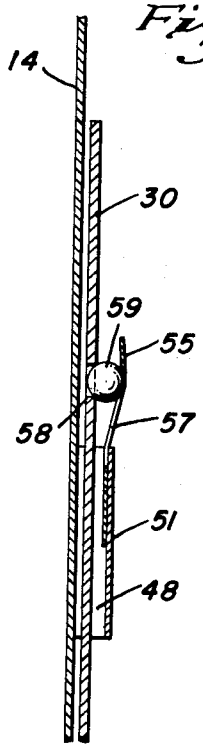


Fig. 4.

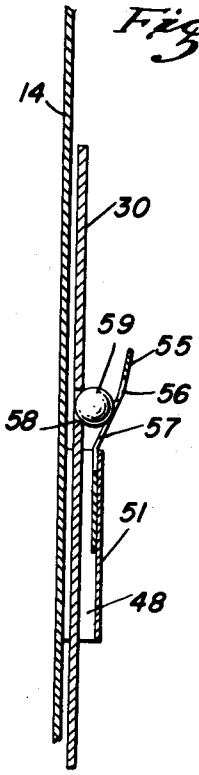


Fig. 2.

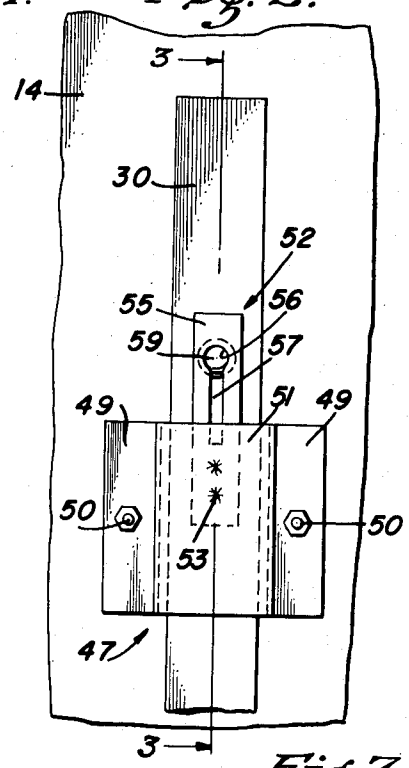
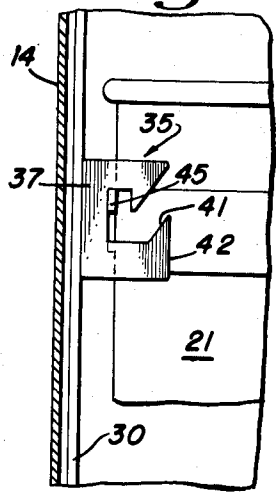


Fig. 7.



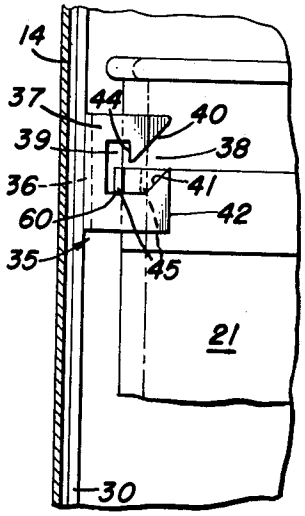


Fig. 5.

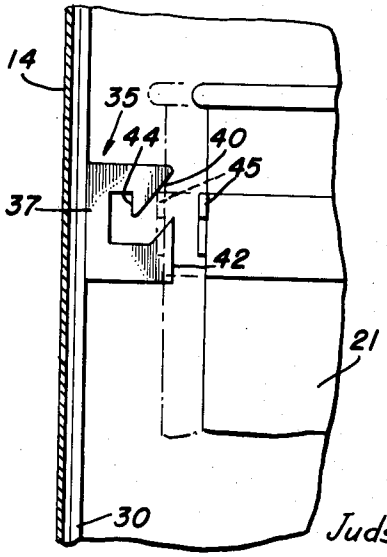


Fig. 6.

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2,719,770

FILING CABINET

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Application February 8, 1954, Serial No. 408,916

3 Claims. (Cl. 312—221)

This invention relates generally to cabinets and relates more particularly to filing cabinets.

While the invention has particular utility embodied in metal filing cabinets and is shown and described embodied therein, it is to be understood that the utility of said invention is not confined thereto.

Serious accidents have occurred as a result of filing cabinets overturning onto a person when opening well-filled upper drawers and this danger is always present and particularly likely to occur when the drawers are heavily loaded and the upper drawers are pulled out a substantial distance to get at papers at the back.

Accidents of this character have occurred in four-drawer filing cabinets and the danger is increased with higher cabinets having more drawers. In some offices an attempt has been made to eliminate this danger by anchoring the cabinet to the floor or to walls but this is not always feasible and is expensive and difficult. Moreover, the floor and/or walls are likely to be damaged by the anchoring means. Moreover, should it be desired to move the cabinets, they must be detached from the floor and/or wall and this entails considerable labor and consumes considerable time.

It is, therefore, an object of the present invention to overcome the above mentioned danger and difficulties.

Another object of the invention is to provide means which will permit opening of only one drawer at a time.

Still another object of the invention is to provide mechanism of this character which will lock all the drawers but one at a time in the closed position.

A further object of the invention is to provide mechanism of this character which will permit opening of any one of the drawers when all the drawers are closed.

A still further object of the invention is to provide mechanism of this character that is easy to install and which may be installed in cabinets already manufactured as well as in new cabinets.

Another object of the invention is to provide mechanism of this character that is simple in construction and operation.

Still another object of the invention is to provide mechanism of this character that is relatively inexpensive to manufacture.

Further objects and advantages of the invention will appear in the following part of the specification.

Referring to the accompanying drawings, which are for illustrative purposes only,

Fig. 1 is a perspective view of a filing cabinet in which the present invention is embodied;

Fig. 2 is an enlarged front view of the mechanism for holding the lock hasp or rod in the unlocking position;

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2;

Fig. 4 is a similar view showing the lock hasp in a downward position; and

Figs. 5, 6, and 7 are side views of the lock rod actuating mechanism with a drawer in various positions.

Referring more particularly to the drawings, there is shown a cabinet having sides **10**, a top **11**, a bottom **12**, and a back **14**. The various parts are secured together in any well-known way such as screws or welding or the like. Thus there is formed the cabinet enclosure which is open at the front. The front is provided with transversely extending cross-members **15** which are arranged in parallel relationship to each other and are spaced vertically apart to form drawer openings, indicated generally at **17**. The cross-members **15** may be secured by any well-known means.

At each side of each drawer opening there is a cabinet raceway **18** which is generally channel shaped and which is secured to adjacent portions of the cabinet by any suitable well-known means such as welding, screws or the like. The cabinet raceways **18** extend from front to rear of the cabinet and are located adjacent the horizontal plane of the respective cross-members **15**. The mechanism includes a cradle assembly (not shown) which is slidably mounted in the cabinet raceways of each drawer opening. The drawer assembly is carried by the cradle assembly in the usual manner and each drawer assembly comprises a front **20**, sides **21**, a bottom, not shown, and a back **22**. The various parts of the drawer assembly are secured together in the usual manner and each side is provided with an outwardly extending channel **23** which extends longitudinally of the side adjacent the upper edge thereof. These channels form tracks for reception of the usual follow block angle members, not shown. Also each side has an external angle member, termed a drawer raceway, indicated generally at **25** which has a vertical side **26** spot-welded or otherwise suitably secured to the adjacent side. The other side or horizontal arm **27** extends outwardly of the adjacent side at an angle normal thereto and said member **27** extends longitudinally of its respective side. The parts **27** of the members **25** are operably received within channel members of the cradle so that the drawers may be moved easily and smoothly into and out of the body of the cabinet. Suitable stop means, not shown, limit movement of the cradle assemblies.

The safety locking mechanism comprises a lock rod **30** mounted adjacent and parallel to the back **14**. The rod **30** comprises a relatively flat strip slidably mounted to said back by any suitable means. As shown, this means comprises brackets **31** of sheet metal secured to the back **14** by spot welding **32**. The brackets are spaced apart vertically and each bracket includes a pair of oppositely disposed tongues **33** which overlie the rod **30** and retain same in position although permitting longitudinal movement thereof.

Each drawer is provided with releasable latching means which includes a cam member **35** shown as an angle piece of sheet metal having an arm **36** secured to said rod **30** by any suitable means such as welding or the like. The other arm **37** of the cam member is disposed at an angle normal to the plane of the rod **30** and outwardly of the outer plane of the adjacent side **21** of its respective drawer. The arm **37** is provided with a slot which includes a downwardly inclined portion **38** and a substantially vertical portion **39**. The sides **40** and **41** of the inclined portion **38** provide cam surfaces inclined downwardly and rearwardly with respect to the front edge **42** of the arm **37**, said cam surfaces being spaced apart in generally parallel relationship and the vertical portion **39** of the slot extends upwardly of the lower end of the cam surface **40** to provide a generally vertical abutment **44**. The adjacent drawer is provided with an interlocking member **45** secured to the rear wall **22** by any suitable means such as welding or the like and said member **45** projects laterally of the drawer so as to cooperate with the arm **37**.

Means is provided for releasably retaining the rod **30** in its up position and this means is shown as comprising a bracket, shown generally at **47**, formed of sheet metal

so as to provide a recess **48** in which the rod **30** is slidable. There are outstanding flanges **49** at the sides of the recess portion **48** which are secured to the back wall **14** by any suitable means shown as screws **50**. On the inner side of the outer wall **51** defining the recess **48**, a leaf spring **52** is provided. The spring **52** is secured to the wall **51** by any suitable means such as spot welding **53** and said spring includes a portion **55** which extends upwardly from the bracket **47** and is provided with a keyhole slot having a generally parallel portion **56** and an elongated narrow slot portion **57**. The rod **30** has an opening **58** therein for reception of a ball **59** of any suitable material, said ball being shown as a steel ball. The diameter of the ball **59** is somewhat greater than that of the opening **58** and also is greater than the diameter of the portion **56** in spring **52**. The opening **58** in the rod **30** is so located that when said rod **30** is in its up position, the ball engages the portions **56** of the keyhole slot in spring **52** thereby releasably retaining the rod in its up position. When the rod is moved downwardly, the ball **59** rides along the slot portion **57** of the keyhole slot and the spring is yieldably moved outwardly of the rod **30** to the position shown in Fig. 4.

When all of the drawers are in the closed position, the rod is in its up position, as shown in Fig. 3. The arms **37** are then disposed with respect to the latch members **45** as shown in Fig. 5. It is to be noted that the bottom edges **60** of the slots in the arms **37** abut against the underside of the members **45**. When a drawer is opened, the latch member **45** of said drawer moves to a position indicated in dotted lines in Fig. 5 whereat it engages the bottom of the cam surface **41**. Further outward movement of the drawer causes the member **45** to ride on the cam surface **41** and force the rod **30** downwardly carrying along without the brackets **35**. The ball mechanism of the rod **30** is then in the position shown in Fig. 4 when said rod is in its lower position. The members **45** of the remaining drawers are then in the upper end of the respective parts **39** of the arms **37** and outward movement of any of said other drawers is prevented by engagement of the respective member **45** against the side **44** of the vertical slot portions **39** of the bracket of said drawer.

When the opened drawer is moved to the closed position, the member **45** of said drawer moves into engagement with the cam surface **40** of its respective bracket **35** as best shown in dotted lines in Fig. 6. Further movement of said drawer causes the bracket thereof to be forced upwardly, thereby forcing the rod **30** to the up position where it is releasably held by the ball **59**.

Any other drawer may then be opened but it will be apparent that upon the opening of any drawer, the remaining drawers are locked against opening.

I claim:

1. In latching means for the drawers of filing cabinets wherein said drawers are slidable inwardly and outwardly with respect to said cabinet and vertically arranged: a relatively flat lock rod arranged vertically within the cabinet, adjacent the back thereof and adjacent one side and having an opening therethrough; guide means for said rod so that said rod has longitudinal sliding movement; flanges secured to said lock rod in longitudinally spaced relationship, there being one flange for each drawer, each flange being notched from the forward end, said notch being inclined downwardly and rearwardly from said forward end and having a generally vertical portion at the back thereof to provide an abutment edge, the inclined portion of the notch being defined by spaced generally parallel cam edges; latch members secured to the respective drawers adjacent the inner ends thereof, said latch members being adapted to be received in the notches of the flanges, each latch member being adapted to operably engage the lower cam edge of the adjacent flange as the respective drawer is initially moved in the opening direction, said member acting on the cam edge to move the lock rod downwardly to a position whereat the abutment edges of the other flanges are in the path of their respective latch members so as to prevent said drawers from being opened, the latch member of the opened drawer being adapted to operably engage the other cam edge when said drawer is moved to a position adjacent its fully closed position and upon further closing movement move the lock rod to a raised position whereat all of the drawers are unlatched; means for releasably retaining the lock rod in the raised position, said means comprises a ball of larger diameter than the opening in the lock rod, said ball being received in said opening and a leaf spring extending longitudinally with respect to the lock rod and having a keyhole opening therein with the enlarged portion of said opening of smaller diameter than said ball and receiving said ball when the lock rod is in the raised position, said ball being adapted to move along the narrow portion of the keyhole opening when the lock rod is moved downwardly; and means for fixedly securing one end of said spring.

2. In latching means for the drawers of filing cabinets wherein said drawers are slidable inwardly and outwardly with respect to said cabinet: a lock rod arranged vertically within the cabinet and having an opening therein; guide means for said rod so that said rod has longitudinal movement; arms secured to said lock rod in longitudinally spaced relationship, there being one arm for each drawer, each arm having an abutment, and spaced generally parallel cam surfaces; a latch member for each drawer, each latch member being adapted to operably engage one cam surface of the adjacent arm as the respective drawer is initially moved in the opening direction, said member acting on the cam surface to move the lock rod downwardly to a position whereat the abutments of the other arms are in the path of their respective latch members so as to prevent said drawers from being opened, the latch member of the opened drawer being adapted to operably engage the other cam surface when said drawer is moved to a position adjacent its fully closed position and upon further closing movement move the lock rod to a raised position whereat all of the drawers are unlatched; means for releasably retaining the lock rod in the raised position, said means comprises a ball of larger diameter than the opening in the lock rod, said ball being received in said opening and a leaf spring extending longitudinally with respect to the lock rod and having a keyhole opening therein with the enlarged portion of said opening of smaller diameter than said ball and receiving said ball when the lock rod is in the raised position, said ball being adapted to move along the narrow portion of the keyhole opening when the lock rod is moved downwardly; and means for fixedly securing one end of said spring.

3. In latching means for the drawers of filing cabinets wherein said drawers are slidable inwardly and outwardly with respect to said cabinet: a movably mounted lock rod; and having an opening therein; arms secured to said lock rod, there being one arm for each drawer; a latch member for each drawer and each arm, each latch member being adapted to operably engage a part of the adjacent arm as the respective drawer is initially moved in the opening direction, said member acting on said arm to move the lock rod to a position whereat the other arms are positioned so as to prevent said drawers from being opened, the latch member of the opened drawer being adapted to also operably engage the adjacent arm when said drawer is moved to a position adjacent its fully closed position and upon further closing movement move the lock rod to a position whereat all of the drawers are free to be opened; means for releasably retaining the lock rod in the latter position; said means comprising a ball of larger diameter than the opening in the lock rod, said ball being received in said opening and a leaf spring extending longitudinally with respect to the lock rod and having a keyhole opening therein with the enlarged portion of

said opening of smaller diameter than said ball and receiving said ball when the lock rod is in said latter position, said ball being adapted to move along the narrow portion of the keyhole opening when the lock rod is moved to the first mentioned position; and means for fixedly securing one end of said spring.

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