July 18, 1967 W. H. KAFFERLIN 3,331,644

LOCKING MECHANISM FOR FILE CABINETS

Filed Jan. 24, 1966 3 Sheets-Sheet 1

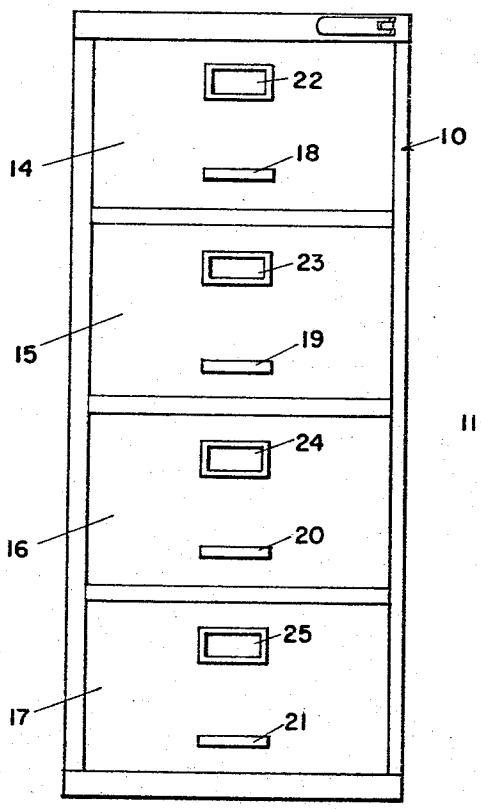


FIG. 1

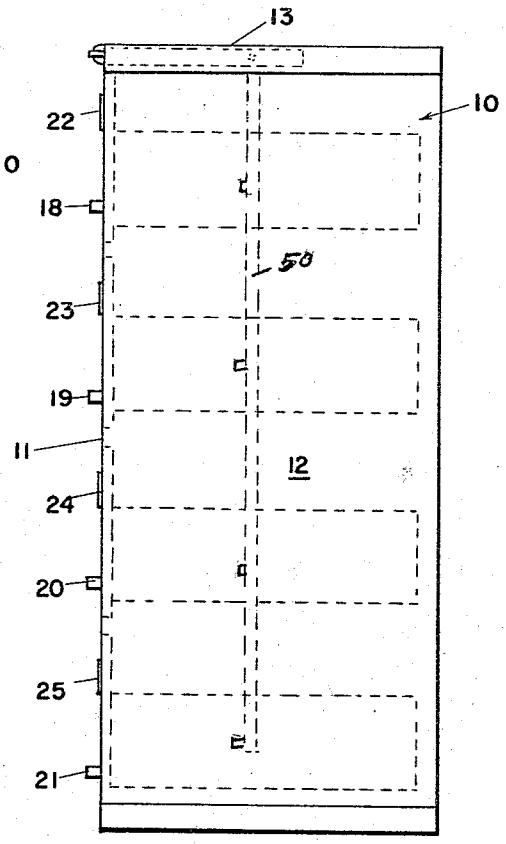


FIG. 2

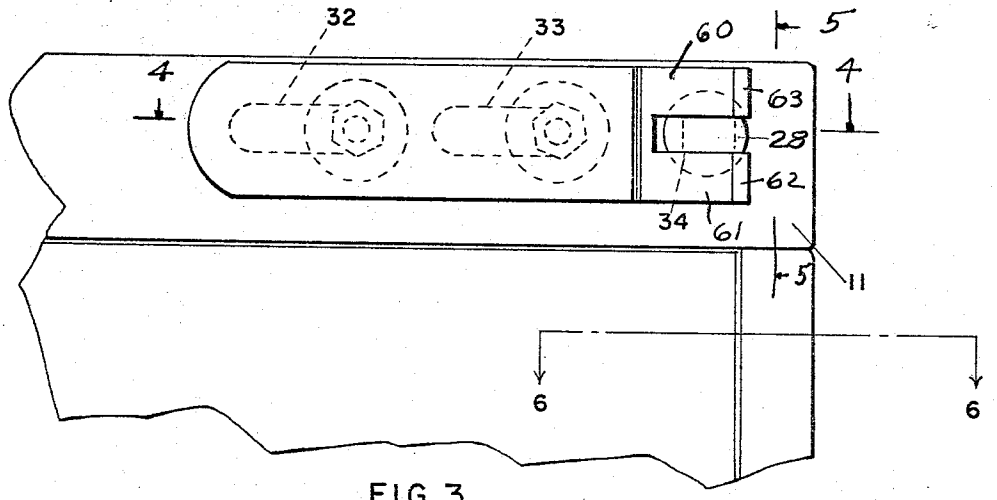


FIG. 3

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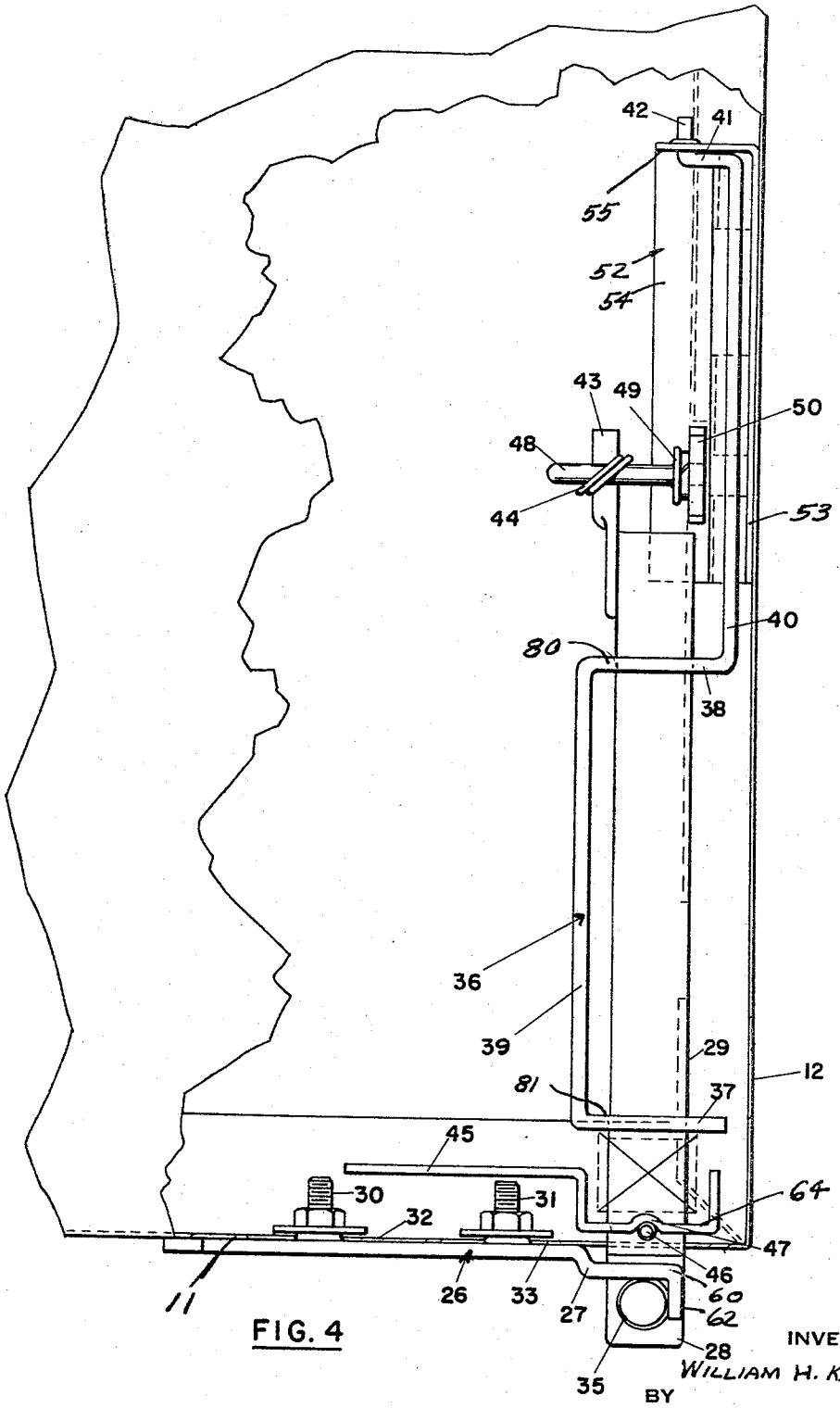


FIG. 4

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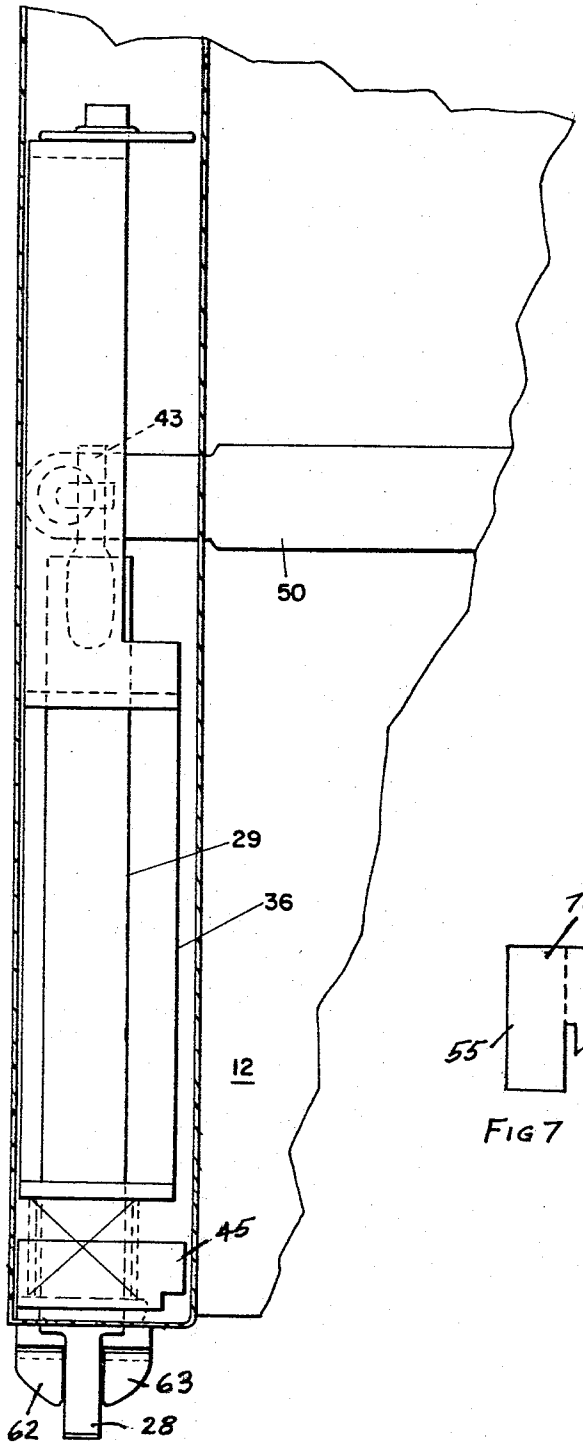


FIG. 5

FIG 7

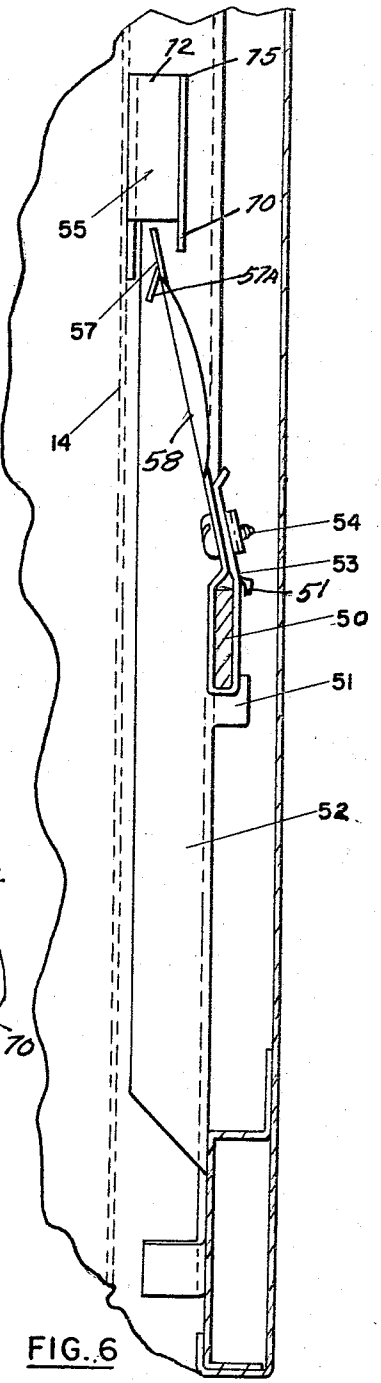


FIG. 6

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LOCKING MECHANISM FOR FILE CABINETS

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14 Claims. (Cl. 312—218)

This invention relates to furniture and, more particularly, to filing cabinets and security locking devices for filing cabinets.

Filing cabinets used to contain secret and confidential documents are frequently locked by a vertical rod passed through the handles of the respective drawers of the filing cabinet and the upper end of the rod locked to a lug fixed to the top of the filing cabinet. It has been discovered that a locking rod to serve the same purpose which will be equally secure and much more pleasing in appearance and convenient can be built into the filing cabinet itself and locked in one position to hold the drawers in locked relation while the rod can be unlocked and moved to a released position, all by means of a rotatable locking body disposed inside the cabinet with an end received when locked in a slot of a hasp. The locking body has a hole in its front end which receives a padlock that holds the hasp in place.

It is, accordingly, an object of the invention to provide an improved locking device for a filing cabinet.

Another object of the invention is to provide a locking device for a filing cabinet which is simple in construction, economical to manufacture, and positive in use.

Still another object of the invention is to provide an improved lock for a multi-drawer filing cabinet.

With the above and other objects in view, the present invention consists of the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawing and more particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportions, and minor details of construction without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:

FIG. 1 is a front view of a filing cabinet according to the invention;

FIG. 2 is a side view of the filing cabinet;

FIG. 3 is in enlarged partial front view of the filing cabinet;

FIG. 4 is an enlarged cross sectional view taken on line 4—4 of FIG. 3;

FIG. 5 is a cross sectional view taken on line 5—5 of FIG. 3;

FIG. 6 is a cross sectional view taken on line 6—6 of FIG. 3; and

FIG. 7 is an enlarged side view of the fastening device on the side of the drawer shown in FIG. 6.

Now with more particular reference to the drawings, the filing cabinet indicated generally at **10** has a front **11**, sides **12**, top **13**, and drawers **14**, **15**, **16**, and **17** all of a conventional type in tandem one on top of the other. The drawers have the conventional handles **18**, **19**, **20**, and **21** and coventional card holders **22**, **23**, **24**, and **25**.

The improved locking device is shown most particularly in FIGS. 3, 4, 5, and 6. The locking device is made up generally of the locking bar **50**, which is slidable upwardly and downwardly and is moved up and down by the crank pin **43** which is fixed to the rear end of the locking body **29**.

The locking body **29** is generally cylindrical in shape with an integral lug **28** on its front end. The cylindrical body extends through a hole in the front **11** of the filing cabinet and extends through holes **80** and **81** in spaced legs **37** and **38** of the bracket **36**. Thus, the body **29** is

rotatably supported by the bracket **36** at its rear end and by the front **11** of the filing cabinet at its front end.

The bracket **36** extends rearwardly at **40** to the leg **41**; thence again laterally, then rearwardly to the leg **42**. The The leg **42** extends through a hole in the rear leg **55** of support bracket **52**. The support bracket may be an angle with a vertical leg **53** attached to the side **12** of the filing cabinet and a bottom leg **54** extending perpendicular inwardly from the side **12**, and a rear leg **55** extending upwardly from the bottom leg **54** and outwardly from the leg **53**.

The body **29** terminates at its front end in the integral lug **28** which is in the form of a flattened portion as indicated best in FIGS. 3 and 5. The lug **28** is received in the slot between the legs **60** and **61** of the hasp **26**.

The hasp **26** has one part that is disposed parallel to the front **11** of the filing cabinet and slides thereon. The part has studs **30** and **31** fixed to it and extending through the slots **32** and **33** on the front of the filing cabinet. The studs **30** and **31** have nuts and lock washers on them which allow the studs to freely slide in the slots **32** and **33** but prevent them from being withdrawn. The hasp has a bifurcated part **27** integral with the first part and is disposed outwardly from the front **11** of the filing cabinet and disposed parallel to the part having the studs **30** and **31** integrally attached thereto. The bifurcated part **27** is bent outwardly to form the legs **62** and **63** which are disposed generally perpendicular to the bifurcated part **27** and which lie along the side of the hole in the lug **28**. The hole in the lug **28** is adapted to receive the shackle of a padlock indicated generally at **35** which has a shackle that extends through the hole in body **29** and is disposed in front of the bifurcated part **27** defining legs **60** and **61** and to the side of the parts **62** and **63** so that when in this position, the hasp cannot be slid to the left nor can the locking body be rotated to thereby lift bar **50**.

A catch member **45** is supported on the inside of the front of the filing cabinet and it has a part generally parallel to the front. The catch is bent to a U-shape as shown, and has a detent groove **47** formed in it. The catch **45** has a hole therein indicated at **64** through which the locking body **29** extends. A pin **46** extends through the locking body and when the locking body is rotated to the locked position, the pin rests in the groove **47**. When the locking body is rotated to the unlocked position which is ninety degrees to the locked position, the pin will be out of the groove **47** and will overlie a part of the front side of catch **45**.

The rear end of the body **29** has a crank pin **43** fixed thereto. The crank pin **43** is spaced from the axis of rotation of the body **29** and extends rearwardly therefrom. The pin **43** is received in the eye **48** of the body **49**. The body **49** is fixed to the locking bar **50** and the pin **43** is held to the body **49** by means of the spring washers **44** which are in the form of rings.

It will be noted that the bracket **36** has spaced legs **37**, **38**, and **41** generally parallel to each other with an intermediate part indicated at **39** and **40** therebetween. Leg **41** extends from the leg **38** to the leg **41** and the intermediate part **39** is disposed between the legs **37** and **38**.

The locking bar **50** has the spaced latches **53** attached to it. The bar **50** slides between saddle members **51** in each of the drawer slides **52**. These saddle members positively prevent the bar **50** from shifting to the front or to the back and restrain it to move in a vertical line.

The latches **53** are folded around the bar **50** and clamped to it by means of bolts **54**. The intermediate part **58** of the latch **53** extends rearwardly and toward the side of the drawer and terminates in end **57**. A tab **57A** is turned inwardly adjacent the end **57** and defines a cleft as shown.

The catches **55** are fixed to the drawers. They have an intermediate leg **72** which supports the integral hook **70** in spaced parallel relation to the side of the drawer. The hook **70** extends upwardly from the intermediate leg **72**.

When the drawer is moved to closed position, the latch **53** moves under the intermediate leg **72** and stops in front of it in the position shown in FIG. 6. Then when the drawer is locked, the bar **50** is lifted so that the end **57** rests in front of the intermediate leg **72** and prevents the drawer from being pulled open. Since the hook **70** extends forward of the leg **72**, it prevents the latch from moving off the end of the intermediate leg **72**.

If the locking bar **50** is raised to the locked position before the drawer is closed, the rear edge **75** of the hook **70** will move into the cleft adjacent the tab **57A** and provide a positive stop to prevent the drawer from being closed.

In a security file, the drawer must be locked positively and if one drawer is not locked with the others, that drawer must be positively unlocked.

It will be noted that when the locking body is moved to the position shown in FIGS. 3 and 5, the crank pin **43** will be rotated to the topmost position so that the locking bar **50** will be raised and the end **57** of latch **53** will be disposed directly in front of the intermediate leg **72** of the catch. Thus, the drawer will be positively held against opening. When the padlock **35** is removed from the hole in the body **29** and the hasp slid to the left so that the hasp moves away from the lug **28**, the locking body will be rotated so that the crank pin **43** moves to the lowermost position, thus moving the locking bar **50** down and moving latches **53** to a position below catches **55** so that the drawers may be freely opened and closed.

If the locking body is rotated to locked position, thereby lifting the locking bar **50** and the latches **53** attached thereto before some of the drawers are closed, those drawers cannot be closed since the tab **57A** will engage the rear edge **75** of the hook **70**, thereby positively holding such drawers in open position.

The foregoing specification sets forth the invention in its preferred practical forms but the structure shown is capable of modification within a range of equivalents without departing from the invention which is to be understood is broadly novel as is commensurate with the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A locking device for furniture having a plurality of drawers disposed in tandem with each other comprising
an elongated locking bar,
said locking bar having spaced locking means thereon disposed along its longer dimension and disposed adjacent each said drawer and adapted to engage cooperating locking means on each said drawer,
a lock body rotatably supported on said furniture,
said lock body having a longitudinal axis disposed generally perpendicular to its longer dimension,
said lock body having means thereon connected to said locking bar adapted to move said locking bar into locked position with said locking means on said drawers when said lock body is rotated to a first position,
said lock body being adapted to move said locking bar to move said locking means out of engagement with said locking means on said drawers when said lock body is rotated to a second position,
and means adapted to be supported on the front of said furniture to lock said lock body in said first position.

2. The locking device recited in claim **1** wherein
said means on the front of said furniture comprises a hasp member,
said hasp member being adapted to be slidably supported on said furniture,

said hasp member having a slot in one end thereof defined by two leg members,
one said leg member having an end disposed at right angles to said hasp member,
said lock body having a flattened portion adapted to be received in said slot in said hasp member when said body is rotated to locked position,
and a hole in the end of said body adapted to receive the shackle of a padlock when said flattened, portion is received in said slot whereby said padlock shackle holds said hasp member against sliding away from said body and said legs restrain said body from rotating and thereby restrain said locking means on said bar from moving from locking engagement with said drawers.

3. The locking device recited in claim **2** wherein
said means on said lock body connected to said locking bar comprises a crank pin fixed to said lock body and offset from the axis of rotation thereof,
and a body fixed to said bar and engaging said pin whereby said locking bar is lifted when said locking body is rotated in a first direction and lowered when said locking body is rotated in a second direction whereby said locking body moves into locked and unlocked relation to said drawers.

4. The locking device recited in claim **1** wherein
a catch member is adapted to be supported on said furniture,
a detent groove is disposed in said catch member,
a catch pin is disposed in said locking body,
said catch pin is adapted to move into said detent groove when said locking body is moved to locked position,
and said catch pin is adapted to move out of said groove when said lock body is moved to unlocked position.

5. The locking device recited in claim **3** wherein
said locking device is supported on a filing cabinet having a front and sides,
said lock body is supported on said filing cabinet by means of a bracket,
means supporting said bracket on said filing cabinet,
said leg having a first and a second leg spaced from each other and being disposed generally perpendicular to said locking body,
a hole in said first leg and a hole in said second leg of said bracket,
a hole in the front part of said filing cabinet,
said locking body extending through said holes.

6. The device recited in claim **5** wherein
said bracket is formed of a flat member,
said first leg of said bracket and said second leg of said bracket being bent generally at right angles to a first intermediate part inbetween,
a second intermediate part of said bracket attached to said second leg being bent generally at right angles thereto and extending generally parallel to a side of said filing cabinet,
a third leg of said bracket being bent generally at right angles to said second intermediate part,
and a fourth leg extending from said third leg and disposed generally parallel to said side of said cabinet,
said fourth leg of said bracket comprising said rear end of said bracket,
said fourth leg of said bracket being rotatably supported in a hole in a member fixed to said filing cabinet.

7. The locking device recited in claim **1** wherein
said means connecting said lock body to said bar comprises a pin on said lock body offset from the axis of rotation thereof and extending generally parallel thereto,
and an eyelet member on said bar receiving said pin.

8. The locking device recited in claim **2** wherein

said lock body comprises a generally cylindrical member.

9. The locking device recited in claim **2** wherein

said hasp member is made of a flat material having a first part disposed generally parallel to said furniture,

spaced studs on said first part of said hasp member,

said studs being adapted to be received in spaced slots in said furniture and to be slidable therein,

said hasp member having a second part adapted to be spaced outwardly from the front of said furniture,

said second part of said hasp member being disposed generally parallel to said first part and comprising said two leg members.

10. A locking device for furniture having a plurality of drawers disposed in tandem with each other comprising

an elongated locking bar,

said locking bar having spaced locking means thereon disposed along its longer dimension and disposed adjacent each said drawer and adapted to engage cooperating locking means on each said drawer,

means to move said locking bar upwardly to locked position and downwardly to unlocked position,

a catch fixed to a side of each said drawer,

spaced latches attached to said bar and disposed below said catches when said bar is moved to the unlocked position,

said latches being disposed in front of said catches when said drawers are closed and said bar is moved to a locked position,

and means on each said latch engaging a rear part of each said catch when said bar is in locked position and any said drawer is in partially closed position whereby the said drawers that have not been fully closed prior to said bar being moved to locked position are prevented from being closed.

11. The locking device recited in claim **10** wherein

said means on each said latch comprises a tab defining

a cleft adapted to receive each said catch when any said drawer is open after said bar is moved to unlocked position.

12. The locking device recited in claim **10** wherein

each said catch has a laterally extending intermediate leg and a hook portion thereon disposed generally parallel to a side of each said drawer,

each said latch is attached to said locking bar and extends rearwardly and toward said drawer and is adapted to engage said catch when said bar is moved to locked position,

and said catch is adapted to move over top of said latch when said bar is in unlocked position,

said catch having a laterally extending tab thereon defining a cleft adapted to engage said catch when said bar is moved to locked position prior to closing a drawer whereby said drawer will be held from being moved to closed position.

13. The device recited in claim **1** wherein

means is provided on said locking means to prevent said drawers from closing after said locking means is locked.

14. The device recited in claim **6** wherein

means is provided on the lower end of said locking bar to prevent any said drawer from closing after said locking means is locked.

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