

May 23, 1972

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3,664,616

OFFICE MACHINE ANTI-THEFT LOCKING APPARATUS

Filed Sept. 21, 1970

3 Sheets-Sheet 1

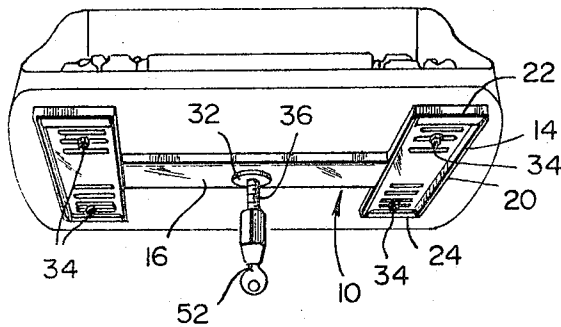


FIG. 1

FIG. 3

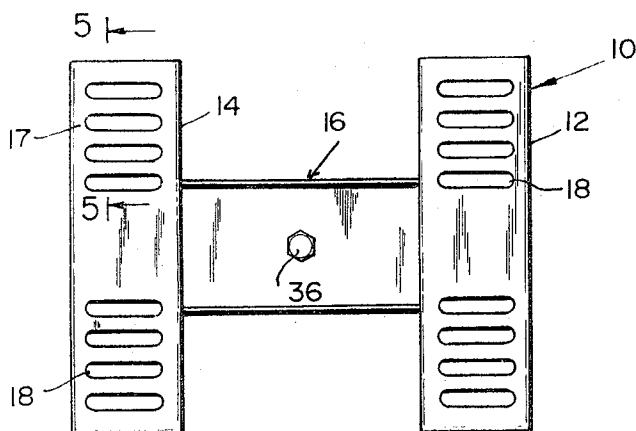
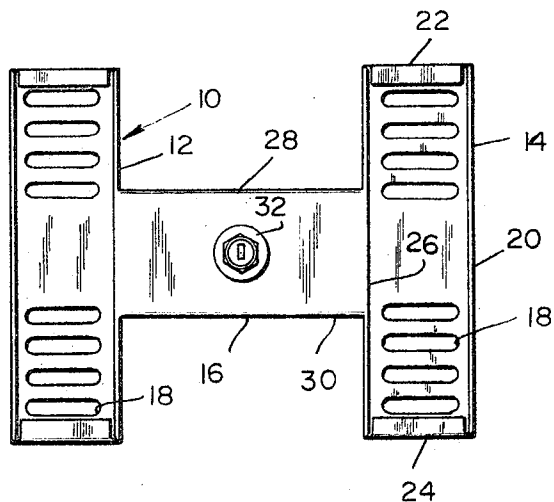


FIG. 2

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FIG. 4

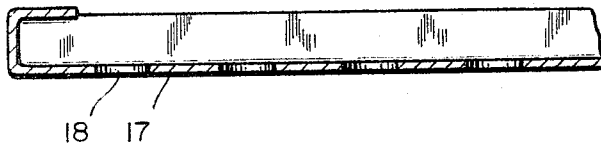
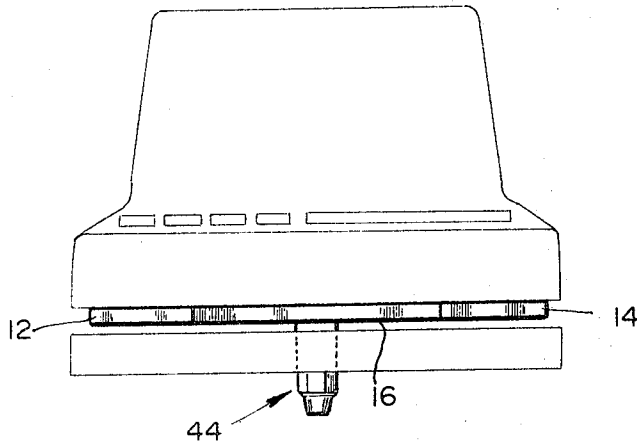
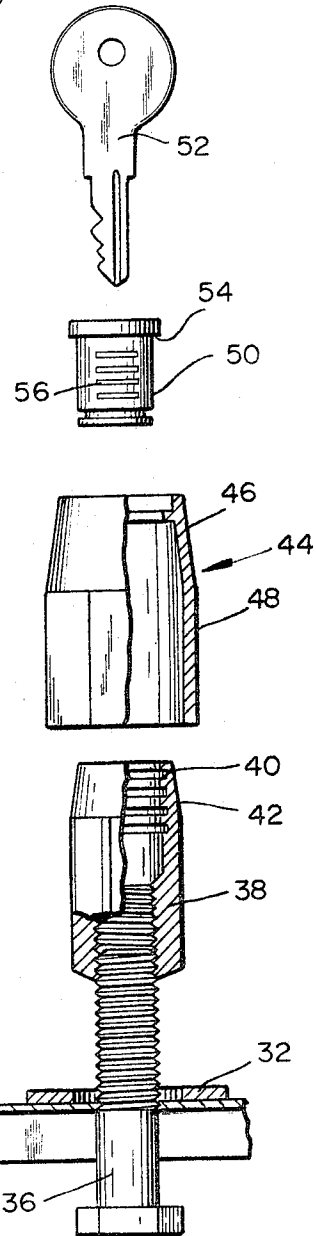
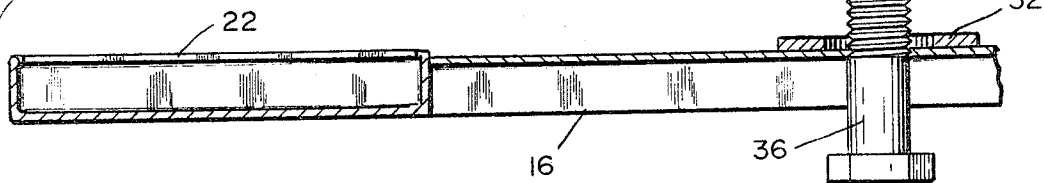


FIG. 5

FIG. 6



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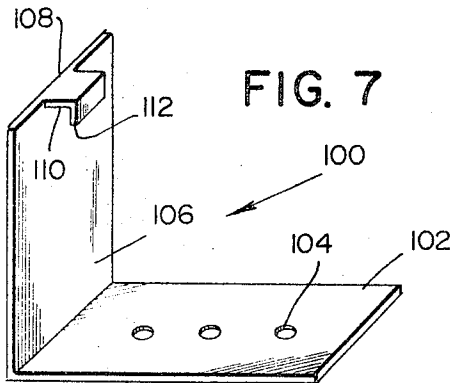


FIG. 7

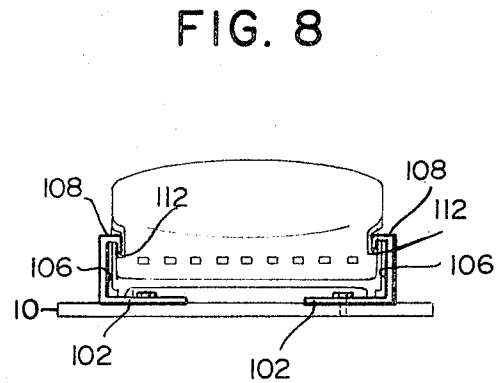


FIG. 8

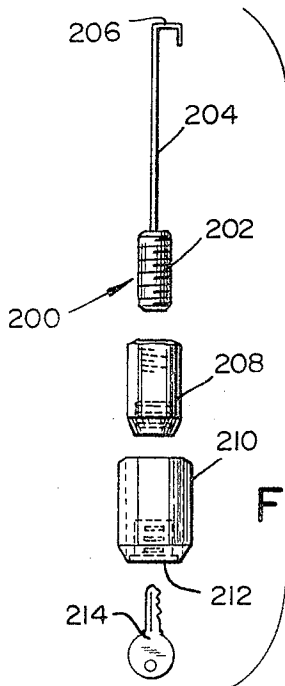


FIG. 9

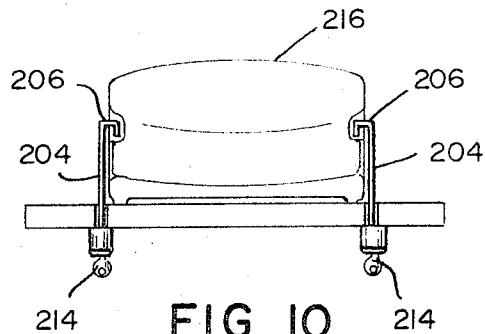


FIG. 10

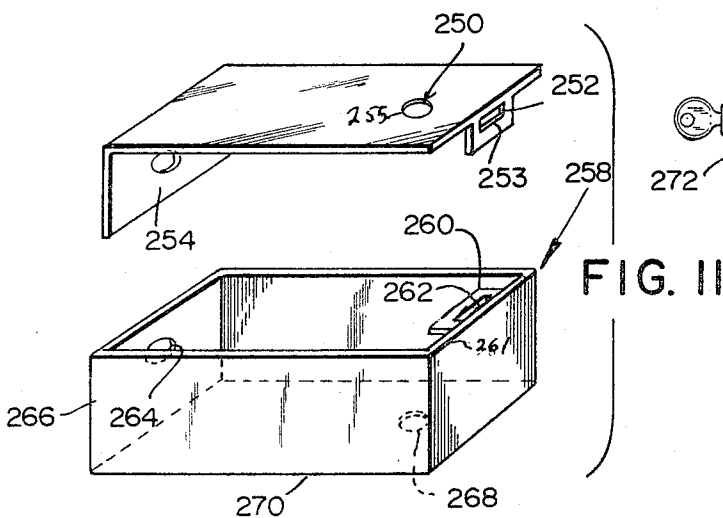


FIG. 11

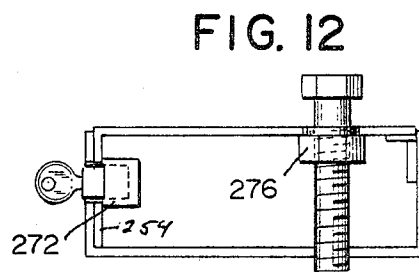


FIG. 12

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OFFICE MACHINE ANTITHEFT LOCKING APPARATUS

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6 Claims

ABSTRACT OF THE DISCLOSURE

An office machine antitheft locking apparatus including a member designed to be placed on the top of a furniture surface. The member includes means for selectively securing a plurality of bolts to which the office machine may be secured. A fastening device projects away from said member and is adapted to extend through a furniture surface and means are provided for securing said fastening device when it extends through the surface. The device is designed so that when an office machine is secured to the bolts there is no access to the bolts.

BACKGROUND OF THE INVENTION

(1) Field of the invention

Office machine antitheft securing apparatus.

(2) Description of the prior art

With the recent upsurge in lawlessness, there has been a great deal of pilferage of office equipment. More specifically, typewriters, cash registers, comptometers, calculators, billing machines, etc. have been illicitly taken during the evening hours from many offices. Since these machines are costly, this pilferage is very expensive for a particular office over a period of time. Many different devices have been designed to prevent such pilferage but most have not been satisfactory. Some of these prior art devices utilized means for securing an office machine to a surface. As an example, some type of locking device was utilized to secure a typewriter to a desk surface. However, most of these prior art locking devices were not strong enough to withstand the determined efforts of a thief utilizing implements such as a crowbar. A further drawback of many of these prior art antitheft locking devices was that they were not suitable for securing the wide variety of office machines described above and were time consuming to install. An additional drawback of some prior art locking devices was that they did not allow the office machine they were securing to swivel as was often required for use by different people.

SUMMARY OF THE INVENTION

It is, therefore, an object of the present invention to provide an improved office machine antitheft locking means.

More specifically, it is an object of the present invention to provide an improved office machine antitheft locking means which is tamper-proof and pry-proof.

A still further object of the present invention is to provide an antitheft locking device for securing office machines to a furniture surface which can be readily placed in operation.

Another object of the present invention is to provide an antitheft locking device for securing an office machine to a furniture surface which can be utilized with a variety of different types of office machines.

Yet another object of the present invention is to provide an antitheft locking means for securing an office

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machine to a furniture surface wherein the office machine can swivel a full 360° while secured to the surface.

A further object of the present invention is to provide an antitheft locking means capable of achieving each of the above and other objects and which is economical to make and reliable in operation.

Briefly, in accordance with the present invention, the foregoing and other objects are achieved by an antitheft locking apparatus consisting of an H-shaped member. Located on the parallel legs of the H-shaped member are a series of slots and when the member is placed on a surface, flanges on these legs contact the surface preventing access to the bottoms of the slots. A bolt is attached to the cross piece of the member and projects downwardly therefrom. A nut can be placed in engagement with the bolt and locking means are provided for preventing removal of the nut from the bolt.

In normal operation, the H-shaped member is secured to the bottom of an office machine. This is done by having the legs of bolts extend through the slots in the member legs and threadly engage threaded openings in the bottom of the office machine. The H-shaped member is then placed on a furniture surface with the flanges which depend from the legs in contact with the surface and preventing access to the heads of the bolts which secure the office machine. The bolt which depends from the cross piece extends through the surface and is secured by a nut below said surface and locking means are secured to the nut to prevent removal of the nut from the bolt and the H-shaped member and the office machine from the surface.

These and other objects and advantages of this invention will become apparent to the reader in the following description.

This invention accordingly consists in the features of construction, combinations of elements and arrangements of parts which will be exemplified in the devices hereinafter described and of which the scope of application will be indicated in the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a bottom perspective view showing how an embodiment of the present invention may be utilized;

FIG. 2 is a top plan view of the embodiment of the invention shown in FIG. 1;

FIG. 3 is a bottom plan view of the embodiment of the invention shown in FIG. 1;

FIG. 4 is a front plan view illustrating how the embodiment of the invention shown in FIG. 1 may be used;

FIG. 5 is a sectional view taken substantially along the lines 5—5 of FIG. 1;

FIG. 6 is an exploded view of the means for securing the embodiment of the present invention to a furniture surface;

FIG. 7 is a perspective view of a further embodiment of the present invention;

FIG. 8 is a sectional view illustrating how the embodiment of the invention of FIG. 7 may be utilized;

FIG. 9 is an exploded view of a still further embodiment of the present invention;

FIG. 10 is a view illustrating how the embodiment of the present invention shown in FIG. 9 may be utilized;

FIG. 11 is an exploded view of still another embodiment of the present invention;

FIG. 12 illustrates an application of the embodiment of the present invention shown in FIG. 11.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In FIGS. 1, 2 and 3 of the drawings, an antitheft office machine locking device according to the present inven-

tion is illustrated and includes an H-frame 10. H-frame 10 includes parallel legs 12 and 14 which are separated from each other by a cross piece 16. The different legs of H-frame 10 are identical to each other, are in registry with each other and together with cross piece 16 are made from cold rolled steel. Since the legs are identical to each other a description of one leg will suffice for an understanding of the present invention with like parts on the legs having the same reference numerals.

As can be seen in FIG. 2, leg 14 includes flat surface 17 having a plurality of slots 18. While four slots are shown in the drawings at the opposed portions of leg 14, it is to be understood that this is for illustrative purposes only and the number of slots on each leg can be varied without departing from the scope of the present invention. As can be seen from the figures, the slots are parallel to each other, perpendicular to the major axis of the legs of the H-frame and parallel to the cross piece.

Flange 20 depends perpendicularly away from surface 17 at one edge of the leg. Turned down flanges 22 and 24 extend from the narrow edges of leg 14 and each includes portions which are parallel to surface 17. A flange 26 depends perpendicularly away from the remaining edge of surface 17 and is parallel to flange 20. The flanges which depend from the different edges of surface 17 all are perpendicular thereto and all extend the same distance away therefrom with the turned over portions of flanges 22 and 24 being the same vertical distance away from surface 17 as are the free edges of flanges 20 and 26.

Flanges 28 and 30 depend perpendicularly away from the opposed free edges of cross piece 16 in the opposite directions as the flanges which depend upon the legs of H-frame 10 (FIG. 2). An opening extends symmetrical-ly through cross piece 16 and a washer 32 can be secured to the bottom of said cross piece as shown in FIG. 3 about the opening.

In normal use, an office machine such as a calculator, comptometer, typewriter, etc., is secured to H-frame 10 as shown in FIGS. 1 and 4. It is to be understood that while a typewriter is shown in the figures and reference is made to a typewriter hereinafter, this is for illustrative purposes only and is not intended in any way to limit the scope of the invention. The H-frame is selected so that slots are located beneath the four threaded openings which are spaced beneath the bottom of conventional electric typewriters. Bolts 34 project through slots 18 on legs 12 and 14 into the threaded openings on the bottom of the typewriter and are engaged therewith. The bolts are tightened until their heads contact the bottom of legs 12 and 14 (FIG. 1).

A bolt 36 extends through the aperture in the center of cross piece 16, and through the desk or table surface to which the office machine is to be secured and has its head on the top of the cross piece. A nut 38 (FIG. 6) is in engagement with the threads of bolt 36 and the nut is tightened so that the bolt pulls the H-frame tightly against the surface. Nut 38 includes conventional threads which are in engagement with the threads of bolt 36 as well as parallel grooves 40 at its uppermost portion. Preferably, nut 38 is hexagonally shaped and includes a taper 42 which surrounds grooves 40.

A locking barrel 44 which includes an upper tapered portion 46 and a lower hexagonally shaped portion 48 surrounds the nut 38 with the hexagonal portion of the locking barrel encompassing the hexagonal portion of the nut and tapered portion of the locking barrel encompassing the tapered portion of the nut. A lock 50 having a key 52 and a rim 54 is normally positioned within locking barrel 44 and when the key is rotated and removed, locking pins 56 engage grooves 40. As a result, rotation of locking barrel 44 does not result in rotation of nut 36 so as to move axially relative to bolt 36. Further, since the locking barrel encompasses nut 38 and may not be removed therefrom by virtue of rim 54 engaging

the top of barrel 44 there is no way to rotate nut 38 to remove bolt 36 from the H-frame. With bolt 36 extending through a surface and secured as just described, it is impossible to remove the nut therefrom and the H-frame from the surface. The flanges which surround the legs of the H-frame prevent access to the bolt heads which secure the typewriters and thus it is impossible to manipulate these bolts and illicitly remove the typewriter from the H-frame. Similarly, flanges 28 and 30 prevent access to the head of bolt 36. If desired, the H-frame may be swivelled about bolt 36 as required.

In FIG. 7 of the drawings, an L-shaped locking means 100 according to the present invention is shown. Locking means 100 includes a base 102 having a plurality of bolt engaging apertures 104 extending therethrough, and an upright portion 106 which is perpendicular to the base. Upright portion 106 is preferably integral with base 102 and the entire locking means is made from cold rolled steel. Located at the uppermost portion of upright 106 is a securing hook 108 which includes a horizontal segment 110 that is perpendicular to upright 106 with a tip 112 depending slightly from the portion of horizontal segment 110 which is furthest from upright 106.

The embodiment of the invention illustrated in FIG. 7 is particularly suited for office machines which include openings elevated from their base. As an example, some adding machines have openings elevated from their base by approximately three inches or so. These openings are usually formed by removing material from the sides of the machines and a portion of the machine defines the bottom of the opening. Normally, similar openings are located on opposite sides of the machines.

The invention in FIG. 7 may be utilized as illustrated in FIG. 8. The office machine is secured as shown in FIG. 8 by having the hooks of two locking means project into openings on the opposite sides of the machine. After the hooks of two locking means are positioned so as to extend into the openings of the office machine the bases of said means are bolted to the H-frame with the nuts beneath said H-frame slots and not shown in the drawings. If desired, the bolts could extend through the H-frame slots and through apertures 104 in engagement with said apertures and eliminate the need for nuts. The H-frame can then be secured to a furniture surface as previously described. As many locking means as required can be used. The bolts which secure the locking means to the H-frame project through the slots with their heads beneath said slots of the H-frame and engage the apertures in the locking means. Since the free ends of the bolts are beneath the office machine there is no access to them and the locking means cannot be removed from the H-frame.

In FIGS. 9 and 10 of the drawings a further embodiment of the invention is shown and includes a bolt 200 having a threaded shaft 202. Extending from one end of the threaded shaft 202 is an extension 204 with a hook 206 being located at the upper end thereof. A nut 208 similar to nut 38 is provided and a locking barrel 210 similar to locking barrel 44 cooperates with nut 208. In a still similar fashion a lock 212 similar to lock 50 and a key 214 is provided for said lock.

The embodiment of the invention just described is particularly suited for office machines having openings on their opposed sides, as is quite conventional, and can be used to secure said machines to a table or desk surface. As can be seen in FIG. 10, a piece of office machinery 216 is shown and includes openings on its opposed sides. Hooks 206 on two different bolts extend into said openings and the bolts project through openings in the member to which the office machine is to be secured and which is shown in FIG. 10 as being a table. Nuts, locking barrels and locks secure the bolts in the same manner as described in FIG. 1 and thus the office machine is secured from illicit removal since the use of locking barrels prevents access to the nuts to free the bolts. The

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hooks are drawn sharply against the openings in the office machinery and cannot be removed therefrom unless the bolts are released from the nuts.

In FIGS. 11 and 12 of the drawings, a further embodiment of the present invention is shown which is specifically designed to prevent access to a nut which secures a bolt and is suited for use with the previous embodiments of the previous invention. As can be seen in FIG. 11, the nut locking arrangement includes a plate 250 which is substantially rectangular in shape and which has flanges 252 and 254 depending perpendicularly therefrom at opposite edges in the same direction. A circular opening extends through flange 254 and a slot 253 extends through a substantial portion of the length of flange 252. A bolt receiving hole 255 is located on plate 250 for a reason that will soon be apparent.

A five-sided container member 258 is designed for use with plate 250 and is shaped as a rectangular prism with the uppermost side being open. A locking lip 260 having a slots 262 extends from edge 261 into the open side of the container. An opening 264 is on side 266 while a bolt receiving hole 268 is on side 270.

The parts are assembled as shown in FIG. 12 with flange 252 received in slot 262 and flange 254 inside the container member and adjacent side 266. The holes in flange 254 and side 266 are arranged so that a lock plug 272 can extend through each of said holes to secure the members to each other. A bolt can be positioned so as to extend through holes 255 and 268 and a nut 276 is secured to the bottom of plate 250 about hole 255 so as to readily engage with said bolt. When the lock arrangement as just described is used with the H-frame, the bolt head will be located on top of the cross surface without there being any access thereto and there is no access to the nut unless the lock plug is removed. Accordingly, it is not possible to remove the H-frame from the bolt and thus the office machine which is secured to the H-frame cannot be illicitly taken.

It is to be understood that while the embodiment shown in FIGS. 11 and 12 is described in conjunction with the previous embodiments of the invention, this description is for illustrative purposes only and other uses will readily be apparent. While the embodiments of the invention have been described in connection with office machines, it is to be understood that they can be used to secure television sets, tape recorders and other related items.

It will be seen that there are provided devices which achieve the various objects of the invention and which are well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above set forth, it is to be understood that all matter herein described or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described the present invention, there is claimed as new and desired to be secured by Letters Patent:

1. A locking apparatus for an office machine of the type including a plurality of tapped openings extending through its bottom which is supported on a generally horizontal element having opposed first and second surfaces, said apparatus comprising a steel member having a plurality of slots, said member adapted to be placed on the element first surface and utilizing a plurality of bolts with each bolt normally extending through a different slot and

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including a head which is adapted to be placed adjacent the element first surface, said slots arranged so that each bolt can be positioned directly beneath a tapped opening of the office machine and can be placed in mated engagement with a tapped opening of the office machine, flanges extending downwardly from the member and adapted to be placed in contact with the element first surface and preventing access to the heads of the bolts positioned in the slots, a fastening device secured to said member and adapted to extend through the element and means that can be placed adjacent the element second surface for selectively engaging said fastening device to hold the member tight against the element first surface to prevent said member and the office machine secured thereto from being illicitly removed.

2. Apparatus according to claim 1 wherein said member has an H configuration with the legs of the H being parallel to each other and connected by a cross piece perpendicular to each of said legs, said slots extending through the ends of each of said legs.

3. Apparatus according to claim 1 wherein said member is made from cold rolled steel.

4. Apparatus according to claim 1 wherein said fastening device is a bolt, said means for selectively engaging said fastening device including a nut which may be placed in engagement with said bolt, and means for selectively preventing removal of said nut from said bolt.

5. Apparatus according to claim 4 wherein said means for preventing removal of said nut from said bolt includes a closed container having a plurality of sides, said bolt passing through at least one side of said container, said nut being within said container and means for selectively allowing said container to be opened to provide access to said nut.

6. Apparatus according to claim 1 further including an L-shaped office machine lock, said L-shaped lock having a base, an upright portion extending perpendicularly away from said base, a hook extending from the part of said upright portion furthest away from said base, said base having a plurality of apertures, means extending through said apertures and securing said base to said member.

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ALBERT G. CRAIG, JR., Primary Examiner

U.S. Cl. X.R.

70—58, 232; 248—203