

[54] **LOCKING CABINET ASSEMBLY**
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[51] Int. Cl.**B65d 7/00, B65d 55/02**
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 220/55 L, 4 R, 3.94; 174/48, 49, 66; 70/137,
 159, 160, DIG. 34

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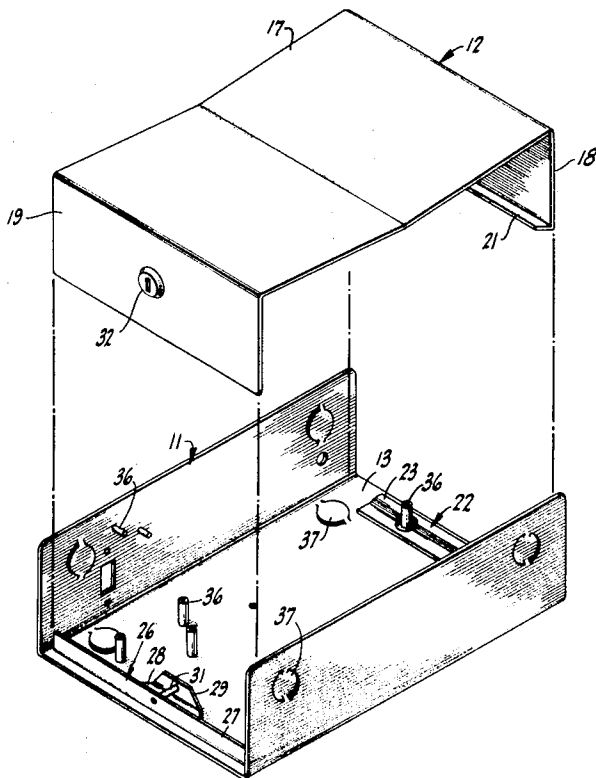
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[57] **ABSTRACT**

Locking cabinet assembly comprising generally U-shaped base and cover sections disposed in opposite attitudes. Interlocking flange means is provided for securing one end of the cover section to the base section, and releasable locking means is provided for locking the other end of the cover section to the base section.

10 Claims, 6 Drawing Figures



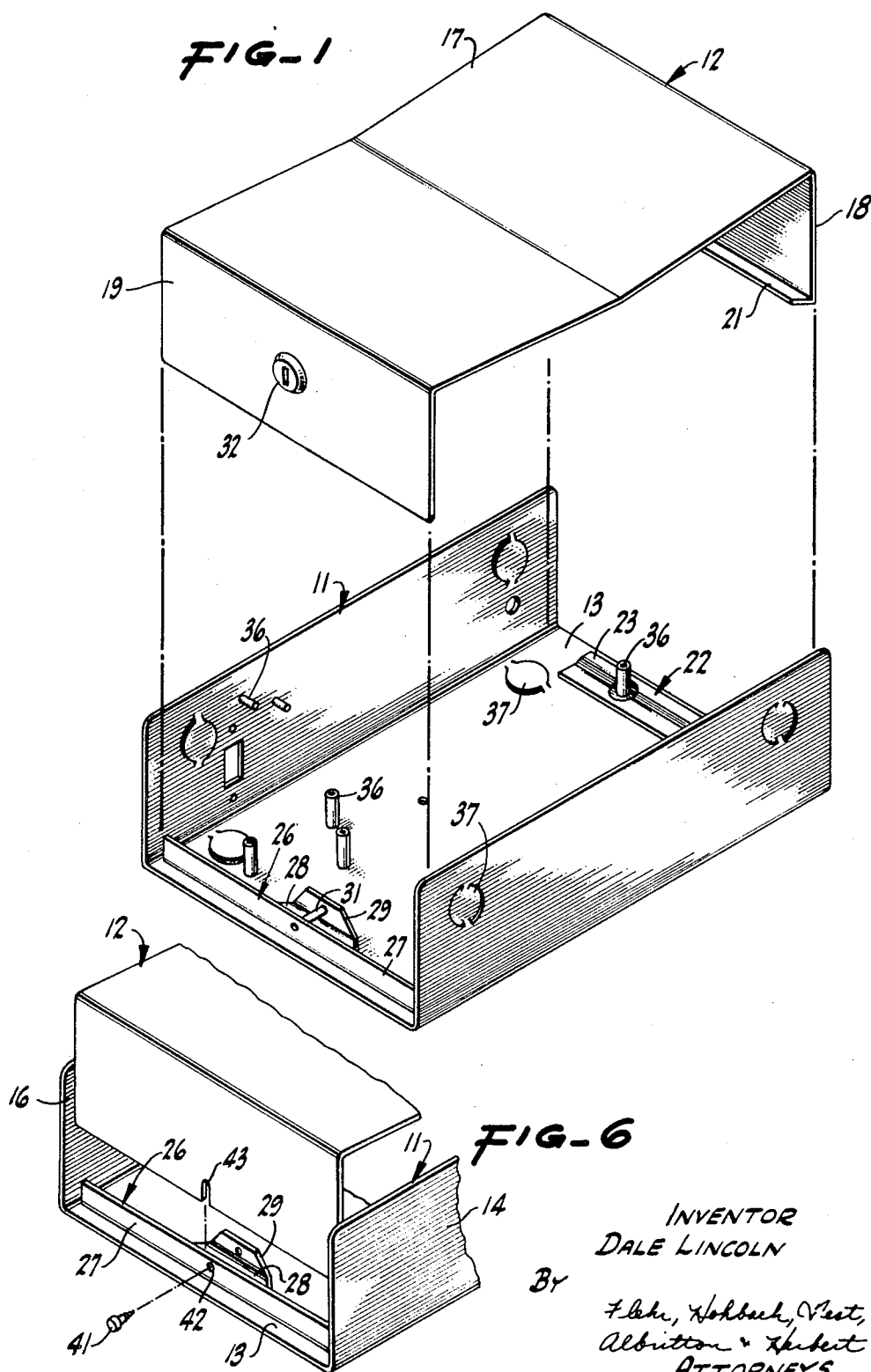


FIG-2

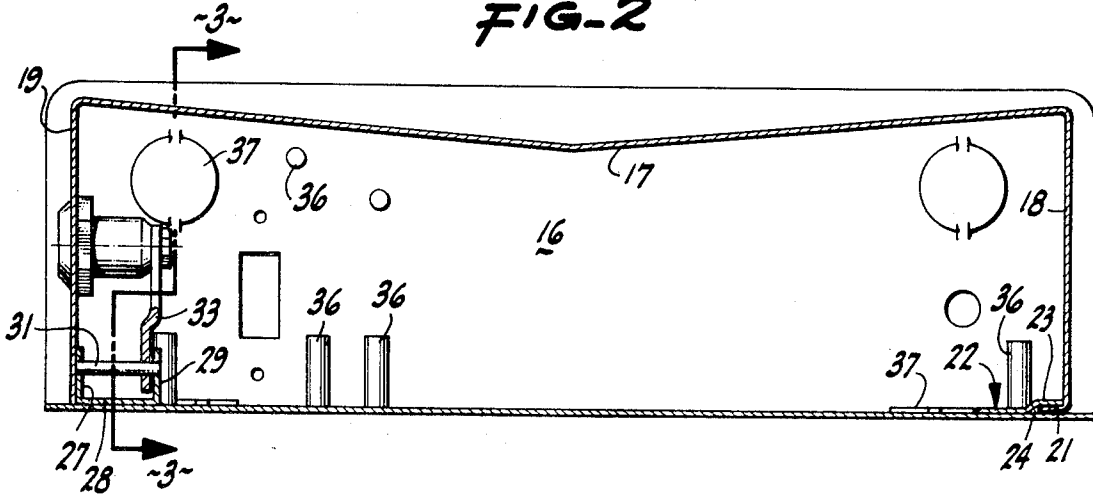


FIG-3

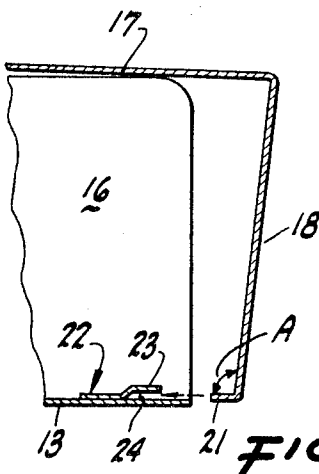
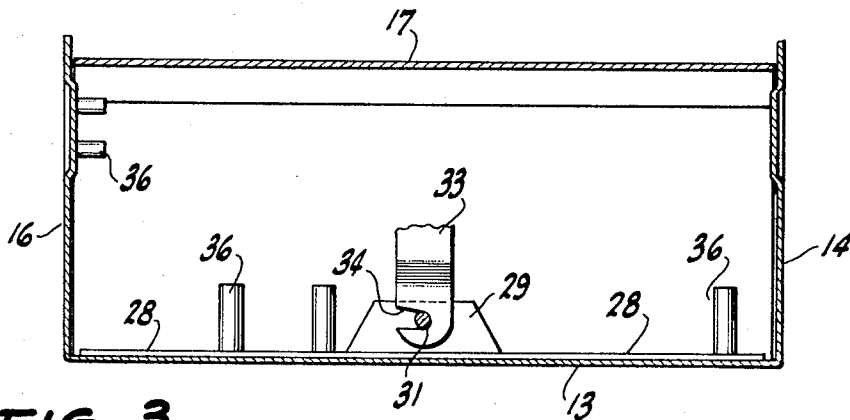


FIG-4

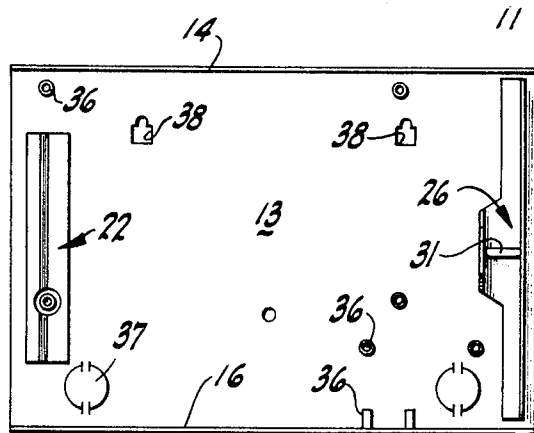


FIG-5

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LOCKING CABINET ASSEMBLY

SUMMARY AND OBJECTS OF THE INVENTION

This invention pertains generally to equipment enclosures and more particularly to a cabinet assembly which is particularly suitable for housing electronic equipment such as a burglar alarm.

This cabinet assembly includes generally U-shaped base and cover sections which are disposed in opposite attitudes to form an enclosure. Interlocking flange means is provided for securing one end of the cover section to the central portion of the base section, and releasable locking means is provided for locking the other end of the cover section to the base section. In one embodiment, this locking means comprises a key-operated lock, and in another embodiment it comprises a removable screw.

It is in general an object of the present invention to provide a new and improved locking cabinet assembly.

Another object of the invention is to provide a cabinet assembly of the above character which is particularly suitable for housing electronic equipment such as a burglar alarm.

Additional objects and features of the invention will be apparent from the following description in which the preferred embodiments are set forth in detail in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded perspective view of one embodiment of a locking cabinet assembly incorporating the present invention.

FIG. 2 is a sectional view of the assembled cabinet assembly shown in FIG. 1.

FIG. 3 is a cross-sectional view taken along the line 3-3 in FIG. 2.

FIG. 4 is an exploded sectional view of a portion of the cabinet assembly shown in FIG. 1, illustrating the operation of interlocking flange means provided at one end of the cover section.

FIG. 5 is a top plan view of the base section of the cabinet assembly shown in FIG. 1, rotated to a position in which the assembly can be conveniently hung on a wall.

FIG. 6 is an exploded perspective view of a portion of a cabinet assembly incorporating the present invention, illustrating an alternative means for locking the cover and base sections of the assembly together.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The cabinet assembly includes a generally U-shaped base section 11 and a generally U-shaped cover section 12. These sections are fabricated of sheet metal, such as aluminum or steel. The base section forms the bottom wall 13 and side walls 14, 16 of the cabinet assembly, and the cover section forms the top wall 17 and the end walls 18, 19 of the assembly. The two halves of the top wall are inclined downwardly toward the center line of the wall, as can best be seen in FIGS. 1 and 2. The side walls 14 and 16 are separated by a distance slightly greater than the width of the top wall 17 and end walls 18 and 19, and when the cabinet is assembled the cover section 12 rests between the side walls of the base section 11.

The outer or lower extremity of the end wall 18 is formed to include the flange or lip portion 21. This

flange extends from the wall 18 by an angle A on the order of 90°. In the preferred embodiment, the angle A has a magnitude between 93° and 95°, and the flange 21 extends in a direction generally parallel to the top wall 17, with the ends of the flange being beveled, as shown in FIG. 1.

A second flange 22 is mounted on the bottom wall 13 proximate one end thereof. This flange is secured to the bottom wall by suitable means, such as welding, and it is formed to include a raised lip portion 23. The lower surface of the lip portion 23 is separated from the upper surface of the bottom wall 13 by a distance corresponding to the thickness of the flange 21, thereby forming a slot 24 in which the flange 21 is inserted when the cabinet is assembled. The outer edge of the lip portion 23 provides a limiting abutment for the inner surface of the end wall 18.

A generally U-shaped stop member 26 is mounted on the bottom wall 13 proximate to the end opposite the flange 22. This member includes an outer wall 27 which extends substantially the entire length of the bottom wall 13, a lower wall 28 which is attached to the bottom wall 13 by suitable means, such as welding, and a relative short inner wall 29 which is located centrally of the outer wall 27. The outer surface of the wall 27 provides a limiting abutment for the inner surface of the end wall 19 when the cover section 12 is mounted on the base section 11. A generally cylindrical latch pin 31 extends between the walls 27 and 29 in a direction generally parallel to the bottom wall 13.

A key-operated lock 32 is mounted on the end wall 19 of the cover section. This lock includes a rotatably mounted latch member 33 which is formed to include a slot 34 for engaging the latch pin 31. The position of the latch member 33 is controlled by a key in a conventional manner.

A plurality of mounting posts 36 are provided for supporting electronic components, such as printed circuit boards within the cabinet. These are conveniently welded to the walls of the cabinet, and they can be located as desired to accommodate the components. Holes provided with knockouts 37 and other conventional mounting holes are formed in the walls to accommodate electrical leads, connecting cables, and other components, as desired. A pair of elongated mounting holes 38 are formed in the bottom wall 13 to provide means for hanging the entire cabinet assembly on a pair of mounting screws, not shown.

Operation and use of the cabinet assembly can now be described briefly. Let it be assumed that components have been mounted in the cabinet as desired. The cover section 12 is mounted on the base section 11 by inserting the flange 21 into the slot 24 until the inner surface of the wall 18 abuts against the outer portion of the flange 22. With the flange 21 so engaged, the end wall 19 can be lowered over the stop member 26 until the lower edge of the end wall abuts against the upper surface of the bottom wall 13. In this position the cover section is constrained against lateral movement by the flange 22 and the stop member 26. The latch member 33 is then rotated by the key in a clockwise direction, as viewed in FIG. 3, until the slot 34 engages the latch pin 31, and the cabinet is securely locked.

To unlock the cabinet, the key is inserted in the lock, and the latch member 33 is rotated in the counter-clockwise direction until the pin 31 is released from the slot 34. The end wall 19 is then raised until the lower

edge clears the upper edge of the outer wall 27 of the stop member. The flange 21 can then be slid out of the slot 24, and the entire cover section can be lifted away from the base section.

FIG. 6 illustrates an alternative arrangement for securing the end wall 19 to the stop member 26. In this embodiment, a screw 41 is threadedly mounted in a hole 42 in the outer wall 27 of the stop member, and an elongated slot 43 is provided in the end wall 19. This slot opens through the lower edge of the wall 19, and its width is narrower than the diameter of the head of the screw 41. Thus, when the cover section 12 is in place on the base section 11, the screw 41 can be tightened to clamp the end wall 19 against the stop member 26. To open the cabinet, the screw 41 is removed sufficiently to free the end wall 19, and the cover section is removed from the base section in the manner described above.

It is apparent from the foregoing that a new and improved locking cabinet assembly has been provided. While only the presently preferred embodiments have been described, as will be apparent to those familiar with the art, certain changes and modifications can be made without departing from the scope of the invention as defined by the following claims.

I claim:

1. In a cabinet assembly, a base portion including a bottom wall and a pair of spaced apart side walls, a generally U-shaped cover member fabricated of a rigid material formed to include a top wall and first and second end walls extending from opposite ends of said top wall, said first end wall being formed to include a flange portion extending in a direction generally parallel to said top wall, means forming a slot proximate one end of said bottom wall for receiving the flange portion of said first end wall when said cover member is mounted on said base portion, a rigid member carried by said base portion proximate to the other end of said bottom wall for engaging the lower portion of the second end wall when said cover member is mounted on said base portion, and releasable locking means for securing said second end wall to said rigid member.

2. A cabinet assembly as in claim 1 wherein said locking means includes a pin member mounted on said rigid member extending in a direction generally parallel to the bottom wall of said base portion and a key operated lock carried by the second end wall, said lock having a latch member for engaging said pin member.

3. A cabinet assembly as in claim 1 wherein said locking means includes a screw threadedly mounted in said rigid member and passing through an opening in said second end wall.

4. A cabinet assembly as in claim 3 wherein said opening is a slot opening through the lower edge of said second end wall, said slot having a width less than the diameter of the head of said screw.

5. A cabinet assembly as in claim 1 wherein said cover member is fabricated of sheet metal.

6. A cabinet assembly as in claim 1 wherein said side walls are separated by a distance at least as great as the width of said top and bottom walls, whereby said cover member rests between said side walls when said cabinet is assembled.

7. A cabinet assembly as in claim 1 wherein said base portion is a U-shaped member fabricated of sheet metal.

8. A cabinet assembly as in claim 8 wherein said flange portion extends from said end wall by an angle greater than 90°.

9. In a cabinet assembly particularly suitable for housing electronic equipment such as a burglar alarm, first and second generally U-shaped sheet metal members each having a central portion and a pair of spaced apart and portions extending from opposing edges of said central portion, said members being disposed in opposite attitudes to form an enclosure, interlocking flange means carried by said members for securing one end portion of said first member to the central portion of said second member, and locking means carried by said members for securing the other end portion of said member to the central portion of said second member, said locking means comprising a latch pin carried by the central portion of said second member and a key-operated lock mounted on said other end portion of said first portion, said lock including a latch for releasably engaging said latch pin.

10. In a cabinet assembly particularly suitable for housing electronic equipment such as a burglar alarm, first and second generally U-shaped sheet metal members each having a central portion and a pair of spaced apart end portions extending from opposing edges of said central portion, said members being disposed in opposite attitudes to form an enclosure, interlocking flange means carried by said members for securing one end portion of said first member to the central portion of said second member, and locking means carried by said members for securing the other end portion of said first member to the central portion of said second member, said locking means comprising a rigid member carried by the central portion of said second member and a screw threadedly mounted in said rigid member, said screw passing through an opening in said other end portion of said first member.

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