# United States Patent

**Bilodeau**

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[54] **THEFTPROOF FRAME ASSEMBLY**


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[52] **U.S. Cl.** ..... **40/152.1**

[51] **Int. Cl.** ..... **G09f 1/12**

[58] **Field of Search** ..... 40/10, 156, 152, 152.1



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[57] **ABSTRACT**

A theftproof frame assembly for pictures, mirrors, or the like wherein, in one embodiment, a mounting plate is formed with spring clips in its planar surface which cooperate with the frame assembly to hold the assembly in a mounted, locked position. In another embodiment, the frame assembly is similarly secured in operative position by a plurality of tabs formed on the periphery of the mounting plate.


**5 Claims, 8 Drawing Figures**

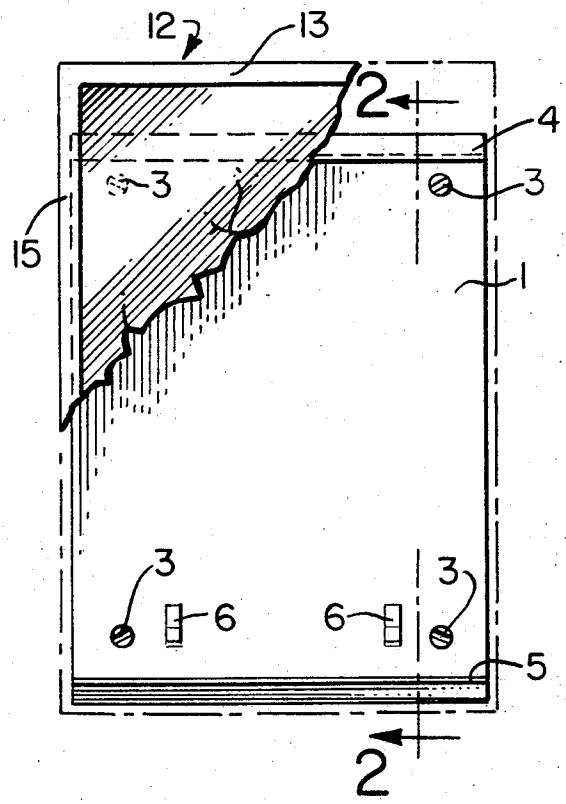


FIG. 1.

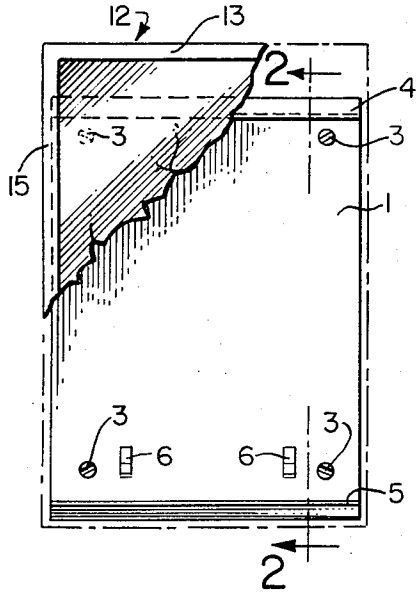



FIG. 2.

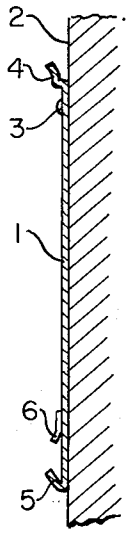



FIG. 3.

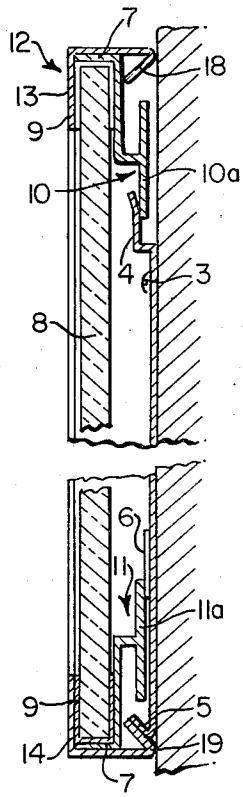



FIG. 4.

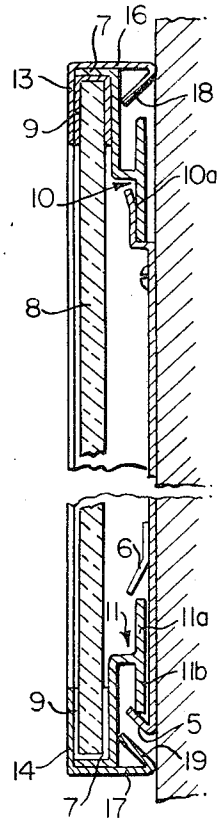



FIG. 7.

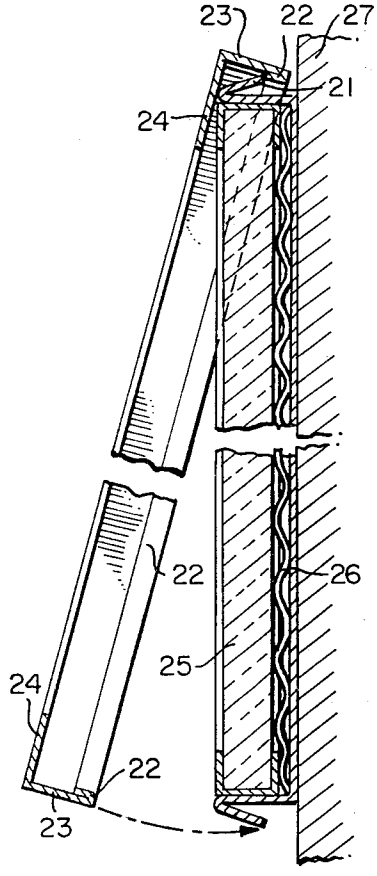



FIG. 8.

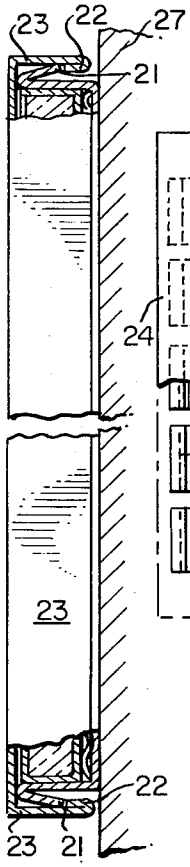



FIG. 5.

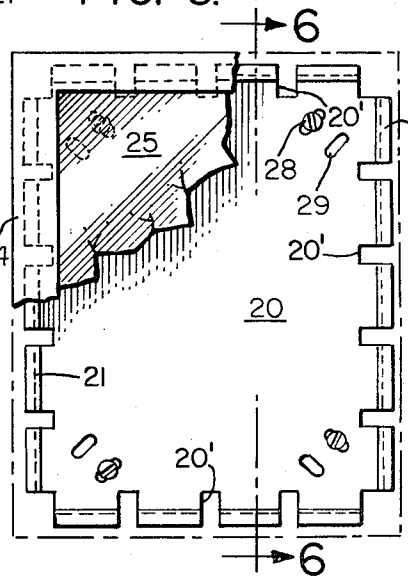
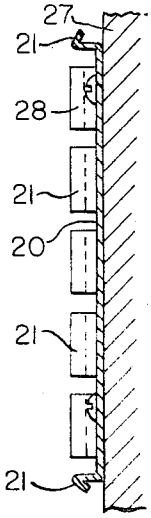



FIG. 6.




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# THEFTPROOF FRAME ASSEMBLY

## BACKGROUND OF THE INVENTION

In many instances where wall-mounted pictures, mirrors, and the like are located in rooms where the general public has free access, expensive problems have been encountered in replacing the mirrors or pictures which become lost or destroyed through theft, damage and defacing. Various types of theftproof frame assemblies have been proposed and while they have been satisfactory for their intended purpose, they have been subject to certain objections; for instance, the necessity of employing special tools, keys and the like for mounting the frame assembly on the wall. In other arrangements where latch elements are employed to secure the frame assembly to the wall, it has been found that the construction and arrangement of the latch assemblies are such that they may be easily destroyed to facilitate the removal of the frame assembly.

After considerable research and experimentation, two embodiments of a theftproof frame assembly of the present invention have been devised to overcome the disadvantages experienced in hitherto-employed theftproof frame assemblies; in one embodiment, a mounting plate is formed with spring clips in its planar surface which cooperate with the frame assembly to hold the frame assembly in a mounted, locked position. In the other embodiment, a plurality of tabs are formed on the periphery of the mounting plate which cooperate with the peripheral edge of the frame assembly to hold the assembly in a mounted, locked position.

In the drawings:

FIG. 1 is a fragmentary, front elevational view of one embodiment of the present invention;

FIG. 2 is a sectional, side elevational view of the mounting plate employed in the embodiment illustrated in FIG. 1;

FIG. 3 is an enlarged, sectional, side elevational view of the frame assembly illustrated in FIG. 1 in the process of being mounted on the mounting plate illustrated in FIG. 2;

FIG. 4 is an enlarged, sectional, side elevational view of the frame assembly illustrated in FIG. 3 showing the frame assembly in its locked operative position on the mounting plate;

FIG. 5 is a fragmentary, front elevational view of another embodiment of the present invention;

FIG. 6 is a sectional, side elevational view of the mounting plate employed in the embodiment illustrated in FIG. 5;

FIG. 7 is an enlarged, sectional side elevational view of the frame assembly illustrated in FIG. 5, in the process of being mounted on the mounting plate illustrated in FIG. 6; and

FIG. 8 is an enlarged, sectional, side elevational view of the frame assembly illustrated in FIG. 7 showing the frame assembly in its locked, operative position on the mounting plate.

Referring to the drawings and more particularly to FIGS. 1 to 4, an embodiment of the present invention is illustrated and comprises, a mounting plate 1 adapted to be secured to a vertical support surface such as a wall 2, through suitable screws 3. The upper edge of the mounting plate is formed with a shoulder portion 4 which extends the width of the plate and the lower portion of the plate is formed with an upwardly extending lip portion 5 which also extends the width of the plate. The shoulder portion 4 and lip 5 are employed for supporting the mirror frame assembly to be described more fully hereinafter. A pair of resilient spring clips or tabs 6 are provided on the mounting plate in proximity to the lip portion 5, and while these clips are illustrated as separate pieces welded or otherwise secured to the planar surface of the mounting plate, it will be appreciated by those skilled in the art that if the mounting plate is fabricated from the same material as the spring clips, the clips could be formed integrally on the mounting plate by cutting the mounting plate to form tabs and then bending the tabs out of the plane of the mounting plate.



The frame assembly which is adapted to be secured to the above-described mounting plate comprises a channel member 7 extending around and secured to the periphery of a mirror through a suitable seal 9. The portions of the channel 7 which extend along the upper and lower edges of the mirror are provided with laterally extending T-members 10 and 11 which are integrally connected to one leg of the channel member 7. To complete the frame assembly, a rectangular frame member 12 including a pair of upper and lower end members 13,14 connected to side members 15 extends around the periphery of the channel 7 and is secured thereto. The end members 13 and 14 are turned rearwardly at their outer edges to provide peripheral flange sections 16 and 17, having inwardly bent lip portions 18 and 19. While not illustrated, flange sections, similar to flange sections 16 and 17, are also formed on the side members of the frame 12.

To mount the mirror assembly, the mounting plate 1 is first secured to the wall 2 as shown in FIG. 2. The mirror assembly, including the frame 12, mirror 8, channel 7 and T-members 10 and 11, is then positioned against the mounting plate as shown in FIG. 3 so that the lip portion 19 of the frame engages the outer surface of the lip 5 on the lower end of the mounting plate; the arm 11*a* of the T-member 11 abuts the spring clips 6 to bias them toward the plane of the mounting plate, and the arm 10*a* of the T-member 10 is inserted partially into the shoulder 4 formed on the upper end of the mounting plate. The mirror assembly is then moved downwardly as viewed in FIG. 4 whereupon the arm 11*a* of the T-member 11 releases the spring clips; the arm 11*b* of the T-member engages the inner surface of the lip portion 5 and the arm 10*a* of the T-member 10 is inserted completely into the shoulder 4 on the upper end of the mounting plate.

By the construction and arrangement of the above-described assembly, it will be readily apparent that the spring clips 6 and lip portion 5 will prevent any attempt to remove the mirror assembly from the wall by moving the assembly upwardly. Similarly, the side edges of the flange portion 4 and lip portion 5 will engage the flange sections on the side members of the frame 12 to prevent removal of the mirror assembly by moving the mirror assembly in a lateral direction.

Another embodiment of the theftproof frame assembly of the present invention is illustrated in FIGS. 5 to 8 wherein the mounting plate 20 includes a plurality of spaced, resilient tabs or lips 21 formed on the periphery of the plate, and extending vertically from

the plane of the plate, the peripheral edge of the plate having a plurality of slots 20' formed therein between the tabs 21, said slots extending into the body portion of the frame to thereby enhance the resiliency of the peripheral edge of the plate member whereby the peripheral edge will accommodate irregularities in the surface of the wall upon which the plate is mounted. The tabs are adapted to engage a reversely bent lip portion 22 formed on the end of a flange portion 23 extending around the peripheral edge of a rectangular frame 24. The mounting plate 20 and frame 24 are adapted to enclose a mirror or picture 25 having a suitable backing 26.

To mount the frame assembly, the mounting plate 20 is first secured to a wall 27 through suitable screws 28 extending through adjustment slots 29 formed in the plate. The backing member 26 and mirror 25 are then placed in the mounting plate and the frame 24 is then placed on the assembly. The manner in which the frame 24 is secured to the mounting plate is illustrated in FIGS. 7 and 8, wherein it will be seen that the frame 24 is first held at an inclined position with the upper edge of the frame positioned in proximity to the wall so that the end of the lip 22 engages the end of each tab 21 disposed on the upper edge of the mounting plate. The lower end of the frame 24 is then moved in the direction of the arrow toward the wall so that the end of the lip 22 on the lower end of the frame engages the end of each tab 21 on the lower end of the mounting plate, as shown in FIG. 8. When the lower end of the frame 24 is moved into locked position on the mounting plate 20, the sides of the frame will also be moved into locking engagement with the tabs 21 on the corresponding sides of the mounting plate.

By the construction and arrangement of the theftproof frame assembly illustrated in FIGS. 5 to 8, it will be readily apparent that the cooperation between the lip portion 22 of the frame and the tabs 21 provides a locking engagement around the periphery of the frame 24 to thereby insure a positive locking of the frame assembly to the wall.

I claim:

1. A theftproof frame assembly of the character described for mounting pictures, mirrors and the like on a supporting surface such as a wall, comprising, mounting plate means adapted to be secured to a wall, resilient means carried by said mounting plate means, frame means adapted to enclose the article to be mounted on the wall and cooperating with the mounting plate resilient means, whereby the frame means is secured to the mounting means; said frame means comprising a channel extending around the periphery of the article to be mounted on the wall, a T-member connected to one leg of the portion of the channel extending along the upper edge of the article to be mounted, another T-member connected to the corresponding leg of the portion of the channel extending along the lower edge of the article to be mounted, and a frame member extending around and secured to the periphery of the channel.

2. A theftproof frame assembly according to claim 1, wherein the mounting plate means comprises a plate member, a shoulder portion formed on the upper edge of said plate member, and an upwardly extending lip portion formed on the lower edge of said plate member.

3. A theftproof frame assembly according to claim 2, wherein the resilient means comprises a pair of spring clips carried by the mounting plate in proximity to the lip portion.

4. A theftproof frame assembly of the character described for mounting pictures, mirrors and the like on a supporting surface such as a wall, comprising a plate member adapted to be secured to a wall, a plurality of spaced, resilient tabs formed on the upper, lower and side edges of the plate member, the space between each tab including a slot portion formed on the periphery of the plate and extending inwardly toward the body portion thereof to thereby enhance the resiliency of the peripheral edge of the plate member, whereby the peripheral edge of the plate member will accommodate irregularities in the surface of the wall upon which the plate is mounted, and frame means adapted to enclose the article to be mounted on the wall and cooperating with the mounting plate tabs, whereby the frame means is secured to the mounting plate along its entire periphery.

5. A theftproof frame assembly according to claim 4, wherein the frame means comprises a frame member extending around the periphery of the article to be mounted, a flange portion formed on said frame member, and a lip portion formed on said flange portion, said lip portion engaging the tabs formed on the upper, lower and side edges of the mounting plate to thereby secure the frame member to the mounting plate.

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