

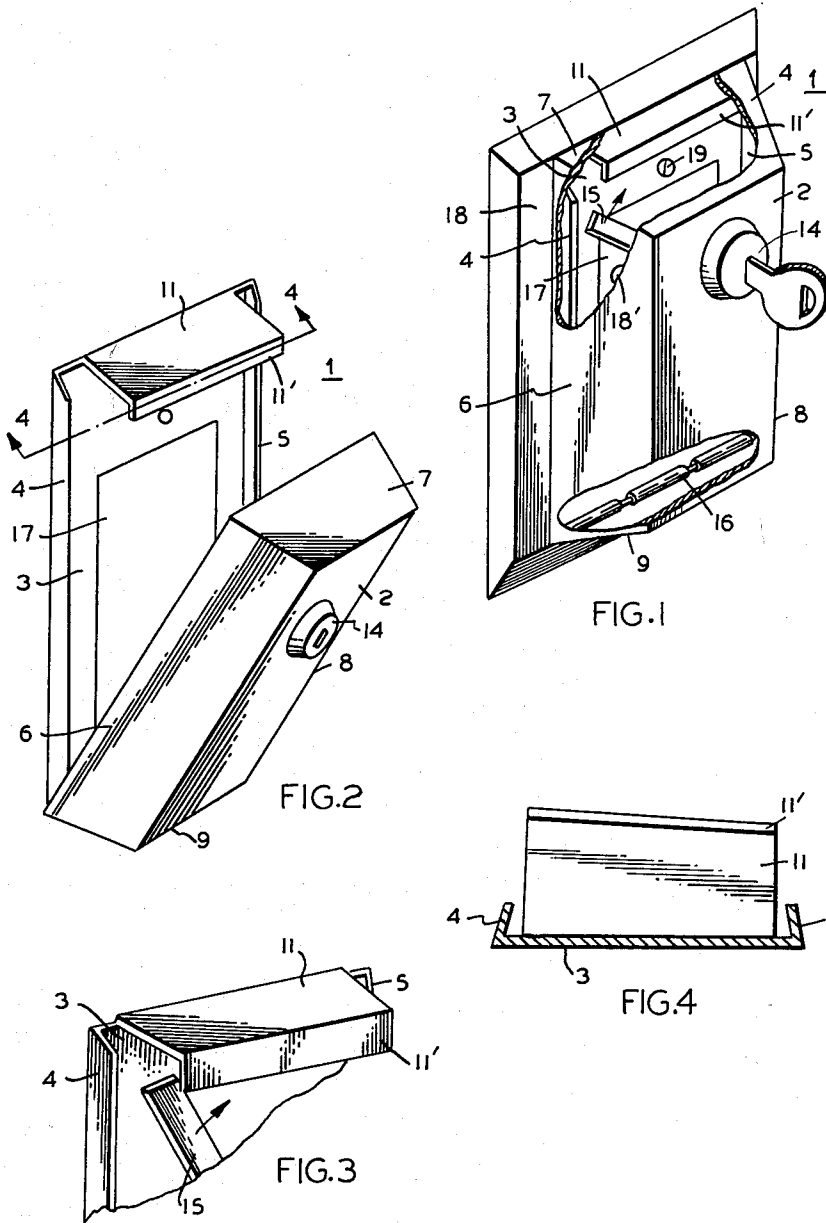
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ELECTRICAL OUTLET ATTACHMENT

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## ELECTRICAL OUTLET ATTACHMENT

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The present invention relates to an electrical outlet attachment and, more particularly, to an electrical outlet attachment which may be locked to prevent unauthorized use of the electrical outlet.

Due to the large and increasing use of television set installations and other electrical equipment in public areas, such as in schools and the like, there has arisen a need for means to prevent unauthorized use. Attachments with locking means have been proposed for mounting upon electrical outlet switch plates and the like to prevent such unauthorized use. Such attachments, however, require close and relatively costly manufacturing tolerances to prevent entrance of dust and dirt and to prevent rattling as a result of building vibrations. Further, the devices proposed are not as tamper-proof as might be desired.

It is, therefore, an object of the present invention to provide a new and improved outlet attachment for mounting on electrical switch plates and the like, which attachment is not subject to the before-mentioned shortcomings.

Another object is to provide a new and improved cover attachment of more general utility, as well.

Still further objects will become apparent in the description to follow and will be more particularly pointed out in the appended claims.

In summary, the objects of the present invention are attained in a locking attachment for mounting upon an electrical outlet plate and the like, having, in combination, a planar plate provided with inwardly inclined side edges and means for securing the planar plate in juxtaposition with an electrical switch plate and the like. A box-like cover is provided having side walls which incline to converge toward its cover surface, the incline being slightly greater than that of the said planar plate side edges to enable resilient-engaging closing action therebetween. A hinge disposed within the cover at the lower end of the planar plate enables closing of the cover against the action of gravity, and the hinge is sufficiently within the cover to prevent tampering. A lock disposed toward the upper end of the cover is provided with an eccentrically-mounted cam rotatable in a plane intersecting the top side-wall of the cover at a region closer to the said cover surface than to the planar plate when the cover is closed thereupon. The lower arm of an L-shaped locking catch extends from the top edge of the planar plate inward of the inclined top side-wall at an incline slightly less than that of the top side-wall further to permit a resilient closing action before locking in cooperation with the said top side-wall, the length of the said lower arm of the L-shaped catch being sufficient to cause the substantially vertical arm of the L to extend in a plane slightly closer to the cover surface than the cam when the L-shaped catch is resiliently closed within the cover in order to enable the cam rotatably to engage the inner surface of the vertical arm to secure the cover to the planar plate without substantial play.

The invention will now be described in connection with the drawing in which,

FIG. 1 is a perspective view, partly broken away to illustrate details of construction, showing a preferred form of the invention as applied to a wall outlet;

FIG. 2 is a similar view of the attachment of FIG. 1 demounted from the outlet and partially opened;

FIG. 3 is a partial view of upper portion of the attachment; and

FIG. 4 is a section view taken upon the line 4-4 in FIG. 2, looking in the direction of the arrows.

Referring to FIG. 1, the locking attachment 1 is shown applied to an electrical outlet plate 18. The attachment 1 is provided with a box-like cover 2 and a rear planar plate 3, apertured at 17 to expose the electrical outlet, part of which is shown at 18', such as a television antenna cable jack or other connector, with the plate 3 secured to the outlet plate 18 as by screws 19. The planar plate 3 is also provided with inwardly inclined side edges 4 and 5, and the cover 2 has corresponding side walls 6 and 8 which incline convergently toward the front surface of the cover 2, with the incline of the side walls 6 and 8 preferably slightly greater than that of the side edges 4 and 5 to enable the illustrated resilient-engaging closing action therebetween. In this manner, when the cover 2 is closed, as in FIG. 1, the side walls 4-6 and 5-8 are overlapping engaged, eliminating rattling due to vibrations, preventing the influx of dust and dirt, and, further serving to discourage tampering since screw drivers and the like cannot readily be inserted to enable forcing of the cover.

Further to prevent tampering with the locking attachment and to eliminate rattling, an L-shaped locking catch 11 is employed, the longer or upper arm of which extends outward from the top edge of the planar plate 3 at an incline slightly less than that of the top side wall 7 of the cover 2, thus enabling a resilient overlapped closing action at the top, also.

A hinge 16 is secured between the lower end of the planar plate 3 and the outer edge of the lower inclined side wall 9 of the cover 2, enabling the cover 2 to pivot to an open position, FIG. 2, under the action of gravity, and to be moved to the closed position of FIG. 1 against the action of gravity. The hinge 16 is actually preferably disposed within the cover 2, as shown, thus concealing the same further to prevent tampering.

A lock 14, shown disposed toward the upper end of the cover 2, is provided with a key-movable eccentrically-mounted cam arm 15, rotatable in the direction of the arrow, FIG. 1, in a plane intersecting the top side wall 7 of the cover 2 at a region closer to the front cover surface 2 than to the rear planar plate 3, when the cover is closed thereupon, in order to eliminate the necessity for recessing the electrical outlet 18' or otherwise to prevent interfering with the electrical outlet or connectors associated therewith.

The length of the longer or upper or outwardly extending arm of the L-shaped locking catch 11 is sufficient to cause the cam arm 15 resiliently to engage the inner surface of the downwardly substantially vertically extending smaller arm 11' of the catch 11, as more particularly shown in FIG. 3. To this end, the substantially vertically extending arm 11' is positioned slightly closer to the cover surface 2 than the plane of the cam arm 15. As is clearest in FIG. 4, moreover, the catch arm 11' is itself preferably at an incline to the plane of the rear plate 3, being closer thereto at the right end thereof in FIG. 4, than at the left end, in order to increase the engaging pressure between the cam arm 15 and the inner surface of the catch arm 11' as the cam arm 15 is rotated toward the locked position.

Modifications will, of course, occur to those skilled in the art and all such are considered to fall within the spirit and scope of the invention as defined in the appended claims.

What is claimed is:

1. A locking attachment for mounting upon an electrical outlet plate and the like, having, in combination, a planar plate provided with side edges and means for securing the planar plate to an electrical outlet plate and the like, a box-like cover the side walls of which incline convergently toward its cover surface to enable overlap-

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ping closing action between the cover side walls and the said planar-plate side edges, hinge means disposed within the cover connecting one end of the cover with the adjacent end of the planar plate to enable pivotal closing and opening of the cover and to conceal the hinge means within the cover, locking means disposed toward the other end of the cover comprising an eccentric cam arm rotatable in a plane intersecting the inclined cover side wall at the said other end of the cover at a region closer to the said cover surface than to the planar plate when the cover is closed thereupon, and an L-shaped locking catch for cooperating with the locking means having outwardly extending and substantially-vertically extending arms, the outwardly extending arm protruding from the planar plate outward therefrom at an incline slightly less than that of the said side wall at the said other end of the cover, further to permit an overlapping closing action, the length of the said outwardly extending arm of the said L-shaped catch being sufficient to cause the substantially vertically extending arm of the catch to be disposed slightly closer to the said cover surface than the cam arm itself in order resiliently to catch and force the cam arm into locking engagement with the inner surface of the substantially vertically extending catch arm, thereby securing the cover to the planar plate without substantial play.

2. A locking attachment as claimed in claim 1 and in which the said planar plate is apertured to expose electrical connections to which access is provided when the said cover is opened about the said hinge means.

3. A locking attachment as claimed in claim 1 and in which the said vertically extending arm of the catch is itself disposed slightly inclined with respect to the plane of the said planar plate.

4. A locking attachment as claimed in claim 1 and in which the said one end of the cover is the lower end and the said other end of the cover is the upper end thereof.

5. A locking attachment for mounting upon an electrical outlet plate and the like, having, in combination, a planar plate provided with inwardly inclined side edges and means for securing the planar plate in juxtaposition with an electrical outlet plate and the like, a box-like cover

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the side walls of which incline convergently toward its cover surface with the incline being slightly greater than that of the said planar-plate side edges to enable resilient-engaging closing action therebetween, hinge means disposed within the cover at the lower end of the planar plate to enable pivotal closing and opening of the cover and to conceal the hinge means within the cover, locking means disposed toward the upper end of the cover and comprising an eccentric cam arm rotatable in a plane intersecting the top inclined side wall of the cover at a region closer to the said cover surface than to the planar plate when the cover is closed thereupon, and an L-shaped locking catch one arm of which extends outwardly and the other substantially vertically downwardly, the said one arm extending from the top edge of the planar plate inward of the said cover top inclined side wall and at an incline slightly less than that of the top side wall, further to permit a resilient closing action before locking in cooperation with the said top side wall, and the length of the said one arm of the L-shaped catch being sufficient to cause the other substantially vertically extending arm of the catch to extend downwardly in a plane slightly closer to the cover surface than the cam arm when the L-shaped catch is resiliently closed within the cover, in order to enable the cam arm rotatably to engage the inner surface of the vertically extending catch arm, thereby securing the cover to the planar plate without substantial play, the vertical arm being positioned closer to the planar plate at one end thereof and inclining away therefrom in order to increase the engaging pressure between the cam arm and the inner surface of the vertically extending catch arm as the cam arm rotatably engages the said inner surface.

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