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[54] **THEFT-PREVENTIVE ATTACHMENT FOR LOCKS**

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[51] **Int. Cl.**.....**E05b 65/08**

[58] **Field of Search**.....70/95–100, 416–418; 292/346, DIG. 2

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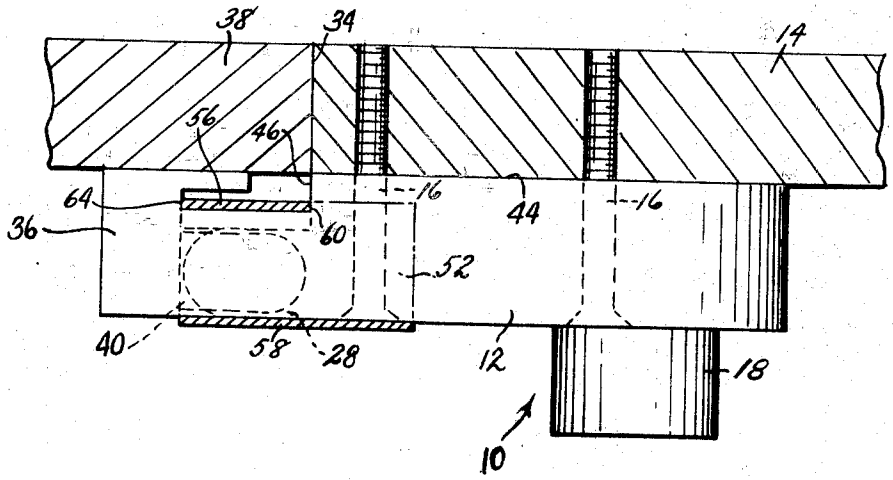
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[57] **ABSTRACT**

A theft-preventive attachment for locks of the rim type which are mounted on sliding doors and movable into engagement with a keeper mounted on the door jamb, both lock and keeper having interfitting bolting fingers or projections. The attachment is in the form of a tube which fits snugly around the projections on the lock body and is carried thereby toward the keeper as the door is slid closed. When the door is closed and the lock bolted, the tube encloses the interfitting bolting projections so that they are not exposed or accessible from the front of the lock and cannot be tampered with. The front wall of the attachment also extends beyond the tube and covers over the mounting bolts of the lock body.

4 Claims, 4 Drawing Figures



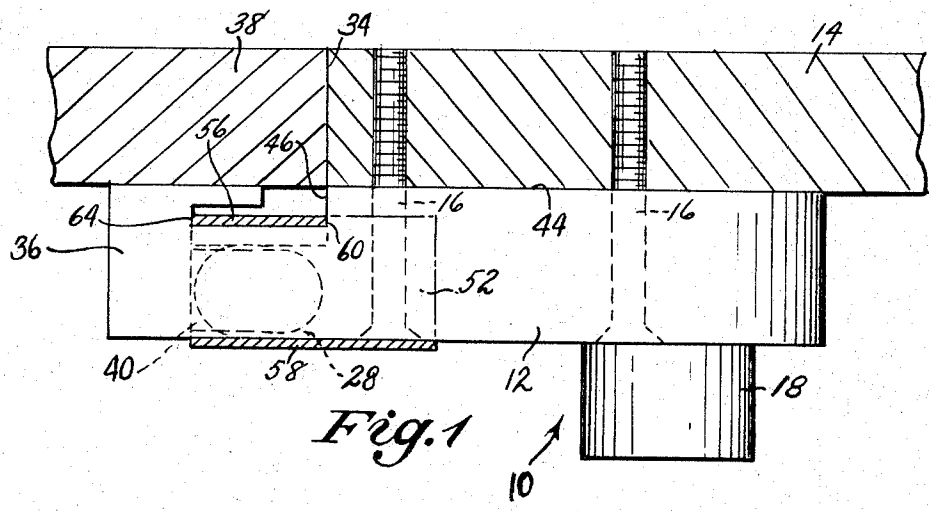


Fig. 1

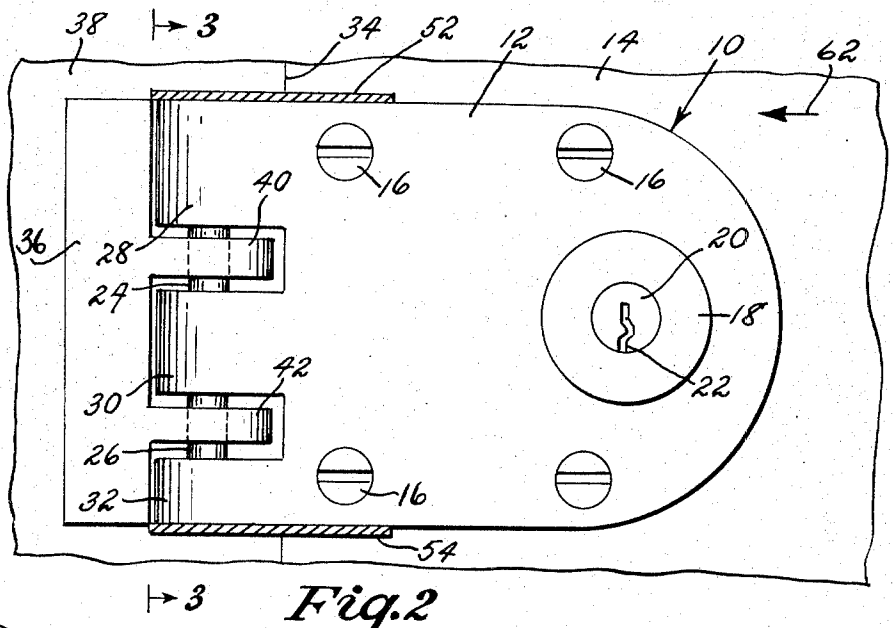


Fig. 2

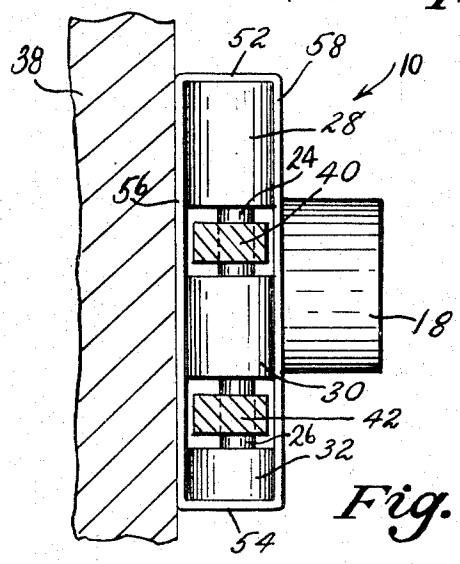


Fig. 3

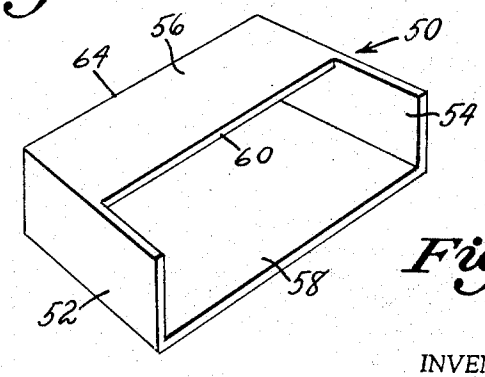


Fig. 4

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THEFT-PREVENTIVE ATTACHMENT FOR LOCKS

The present invention relates to an attachment for a rim type lock which prevents access to the operative portions of the lock when the latter is in bolted condition.

The attachment is devised for use with dead-bolt rim type locks which are mounted on sliding doors of elevators, warehouses and the like. In such lock the lock body containing the cylinder, bolt and keyway, is mounted on the outer surface of the sliding door and is moved with the door into engagement with a keeper mounted on the door jamb. The lock body has a plurality of projections or fingers which interfit with corresponding fingers on the keeper, and when the cylinder is locked, bolt pins in the lock body fingers move downwardly through apertures in the keeper fingers to provide the bolting action.

While locks of this type are difficult to pick, they may be forcibly broken and opened without much difficulty. Since the interfitting fingers and bolt pins are fully exposed and accessible at the front of the lock, a thief need only insert a chisel between the fingers and shear off the bolt pins.

In accordance with the present invention, there is provided a theft-preventive attachment for locks of the aforementioned type comprising a tubular cover which is sized to enclose the interfitting fingers when the lock body is in engagement with the keeper, thereby covering over the vulnerable lock parts which are normally exposed for tampering. The tubular cover is initially inserted over the projecting fingers of the lock body and is movable with the latter into a position in which it also covers over the keeper fingers when the door is slid to closed position. The front wall of the attachment is also made of sufficient length to project beyond the tubular portion of the attachment and overlie the front surface of the lock body, covering over the mounting bolts of the lock body.

It is an object of the present invention to provide a theft-preventive attachment of the character described which is of extremely simple form and may be produced economically.

Another object of the invention is the provision of a theft-preventive attachment of the character described which may be quickly and easily mounted on the lock by merely slipping it over the lock body fingers, and which automatically is brought to proper operative position when the sliding door is closed, and is secured in operative position when the lock is bolted.

Additional objects and advantages of the invention will become apparent during the course of the following specification when taken in connection with the accompanying drawings, in which:

FIG. 1 is a top plan view of a lock in bolted condition with the theft-preventive attachment of the invention mounted thereon, with portions broken away and shown in section to reveal constructional detail;

FIG. 2 is a front plan view of the lock shown in FIG. 1;

FIG. 3 is a section taken along line 3—3 of FIG. 2; and

FIG. 4 is a perspective view of the theft-preventive attachment of the invention.

Referring in detail to the drawings, there is shown in FIGS. 1 to 3 a lock of the type for which the theft-preventive attachment of the present invention is devised. The lock **10** is a conventional and well-known dead-bolt lock of the rim type which is especially made for mounting on the outer surfaces of sliding doors used in elevators, warehouses or the like.

The lock **10** has a flat body portion **12** which is secured to the outer surface of a sliding door **14** by a plurality of screws or bolts **16**. Projecting from the body portion **12** is a housing **18** for a cylinder **20** containing a keyway **22**. The lock **10** operates in the usual manner; when the proper key is inserted in the keyway **10**, the cylinder **20** may be rotated to actuate a sliding bolt (not shown) within the body portion **12** and thereby cause vertical movement of a pair of pins **24**, **26** which are slidably mounted in respective fingers **28**, **30** which project from the body portion **12**. The lock body portion is mounted in such position on the door **14** that the fingers **28** and **30**, as well as an additional finger **32**, project beyond the door edge **34**.

The lock **10** also includes a keeper **36** which is secured to the door jamb **38** in position to cooperate with the lock body **12**. The keeper **36** has a pair of projecting fingers **40** and **42** which register with the spaces between the fingers **28**, **30** and **32**. When the door **14** is slid to its closed position, the keeper fingers **40** and **42** enter the spaces between the body portion fingers **28**, **30** and **32**. When a key is inserted and the lock actuated, the pins **24** and **26** are lowered and enter apertures in the respective keeper fingers **40** and **42** to provide the locking action.

It will be seen in FIG. 3 that while the lock body portion **12** has a flat rear wall **44** which lies, flush against the surface of the door **14**, the fingers **28**, **30** and **32** are spaced outwardly from the plane of the door surface by a distance of approximately ¼ inch, a shoulder **46** being defined between the fingers and the rear wall **44**. Similarly, the fingers **40** and **42** of keeper **36** are spaced forwardly of the surface of door jamb **38**.

In the bolted position of the lock **10** shown in FIG. 2, the keeper fingers **40** and **42** between the fingers **28**, **30** and **32** are exposed for access at the outside of the door **14**, and the heads of bolts **16** are also exposed. Portions of the pin **24** between the interfitting fingers (shown in solid line in FIG. 2) are similarly exposed. In theft attempts, therefore, it is a rather easy matter to break open the lock by inserting a chisel or similar tool in the spaces between the interfitting fingers and simply shearing off the bolt. If necessary, the keeper fingers **40** and **42** may also be cut off, but with somewhat more difficulty. In addition, while the mounting bolts **16** are normally secured against rotation after the lock has been mounted, it is possible for the thief to drill out the bolts from the front of the lock and remove the lock body **12** from the door **14**.

To make such lock tampering efforts more difficult, if not impossible, the present invention contemplates the provision of an auxiliary theft-preventive attachment in the nature of a protective cover **50** which, in the closed position of the lock parts, covers over the interfitting fingers.

As shown in FIG. 4, the cover **50** is in the form of a flat tube having side walls **52** and **54**, a rear wall **56**, and a front wall **58**. The rear wall **56** is of considerably lesser length than the front wall **58** and side walls **52**, **54**, and forms with the latter a rectangular tubular por-

tion having a cross-sectional area generally conforming to and slightly larger than the cross-sectional area of the lock body in the region of the fingers **28**, **30** and **32**. When the cover **50** is inserted upon the lock body **12**, the rectangular tubular portion fits snugly around the three fingers **28**, **30** and **32** and the inner edge **60** of rear wall **56** engages the shoulder **46** of body portion **12**, as indicated in FIG. **1**, to stop further inserting movement.

The cover **50** may be placed on the lock body portion **12**, in the manner just described, immediately before the lock is to be bolted, or it may be left permanently in mounted position without interfering in any way with the operation of the lock. In any even, when the cover **50** is so mounted and the door **14** is closed by sliding it horizontally in the direction of arrow **62** (FIG. **1**) into abutment with the door jamb **38**, the fingers **28**, **30** and **32** are moved into interfitting relationship with the keeper fingrs **40** and **42**, and the cover **50** is carried with the lock body **12** to an operative position in which the rectangular tubular portion encloses the keeper fingers as well as the body portion fingers. This operative position is shown in FIGS. **1**, **2** and **3**.

The cover **50** is so dimensioned that in the aforementioned operative position, the inner edge **60** of rear wall **58** engages or is closely spaced from the shoulder **46** on body portion **12**, while he outer edge **64** of rear wall **58** engages or is closely spaced from the body of keeper **36**, as shown in FIG. **1**. The cover **50** is thus restrained from movement in either direction out of its operative position, and when the lock **10** is bolted, the cover **50** is held in its operative position in which the interfitting fingers **28**, **30**, **32**, **40** and **42** are completely enclosed and covered over by the portions of walls **52**, **54**, **56** and **58** which define the rectangular tube. In particular, the front wall **58** covers over the interfitting fingers so that they are no longer exposed and accessible from the front of the lock.

The cover **50** is made of heavy gauge metal such as bronze or steel, and the walls thereof are made as thick as possible for maximum strength, the limit of such thickness being only determined by the necessity for the rear wall **56** to fit easily between the door and jamb surfaces and the fingers.

As previously indicated, the front wall **58** and the side walls **52**, **54** are made appreciably longer than the rear wall **56** so that portions of these walls extend well beyond the rectangular portion defined by rear wall **56** and form an inner U-shaped section shown in FIG. **4**. These extension wall portions are made sufficiently long that in the mounted, operative position of the cover **50**, the front wall **58** overlies the front face of the body portion **12** and covers over the pair of bolts **16** which are adjacent the fingers, as shown in FIG. **1**. If desired, the front wall **58** may be made even longer so that it also covers over the other pair of bolts **16**.

It will be apparent that when the lock **10** is bolted with the cover **50** in mounted, operative position, the front wall **58** covers over the interfitting fingers and the mounting screws, and the cover must be forcibly broken open for removal, which would be extremely difficult task. The presence of the cover alone would tend to discourage a thief from attempting to tamper with the lock.

While a preferred embodiment of the invention has been shown and described herein, it is obvious that numerous omissions, changes and additions may be made in such embodiment without departing from the spirit and scope of the invention.

What is claimed is:

1. A theft-preventive attachment for use with a rim type lock having a lock body mounted on a sliding door for movement parallel to the plane of the door toward and away from an engaged position with a keeper mounted on the door jamb, said lock body having laterally-projecting bolting fingers which interfit with laterally-projecting fingers on the keeper when the lock body is in said engaged position; said theft-preventive attachment comprising a cover made of heavy-gauge metal and including a tubular portion of rectangular cross section sized to be inserted upon the bolting fingers of said lock body when the latter is out of its engaged position with said keeper, said tubular portion being of sufficient length that when said lock body is moved to its engaged position with said keeper, the tubular portion is brought to an operative position enclosing said interfitting fingers and the front wall of said tubular portion overlies said interfitting fingers to prevent exposure thereof from the front of the lock, said cover having a pair of side walls, a rear wall and a front wall, said front wall and side walls being substantially longer than said rear wall and defining with the latter the rectangular cross section of said tubular portion.

2. A theft-preventive lock attachment according to claim **1** in which said front and side walls have extension portions projecting laterally beyond said tubular portion, said extension portions being sufficiently long that when said tubular portion is in its operative position, the extension portion of the front wall overlies the front surface of the lock body and shields said surface from exposure at the front of the lock.

3. A theft-preventive lock attachment according to claim **2** in which said tubular portion is sized to fit snugly about the fingers of said lock body.

4. A theft-preventive lock attachment according to claim **2** in which said rear wall is made of such length that in the operative position of said tubular portion one end edge of the rear wall is proximate to a portion of the lock body and the other end edge of the rear wall is proximate to a portion of said keeper, whereby said tubular portion is restrained from movement out of its operative position.

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