Nov. 11, 1969 R. SIANA 3,477,261

APPARATUS FOR PREVENTING ACCESS TO A LOCK MECHANISM

Filed July 11, 1967

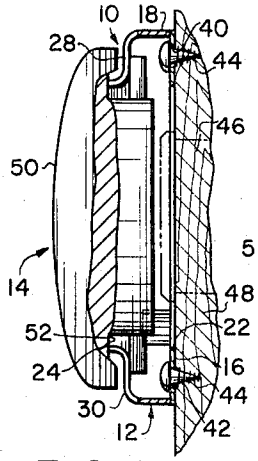


FIG. 1

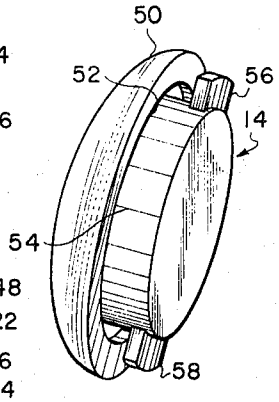


FIG. 3

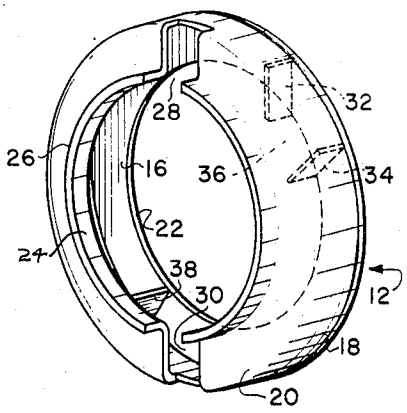


FIG. 2

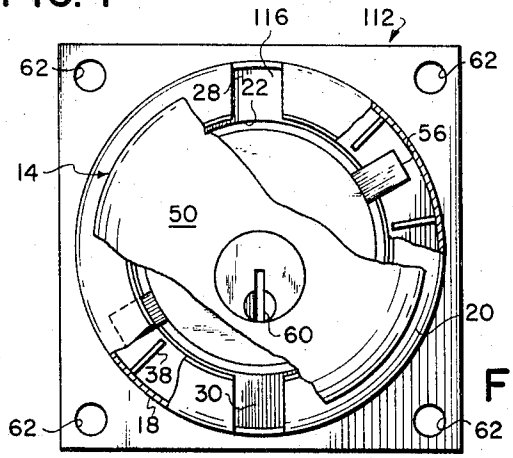


FIG. 4

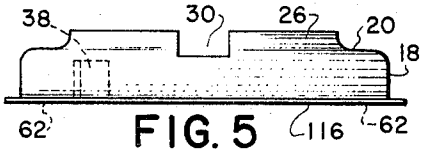


FIG. 5

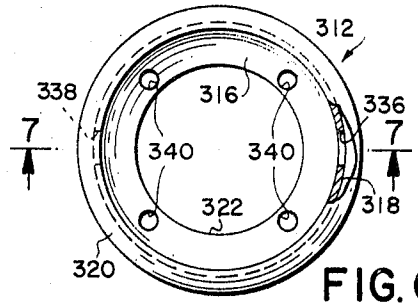


FIG. 6

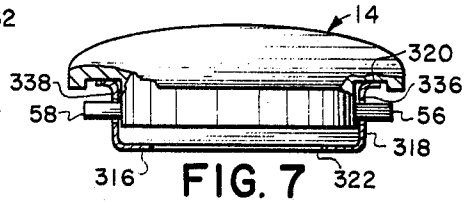


FIG. 7

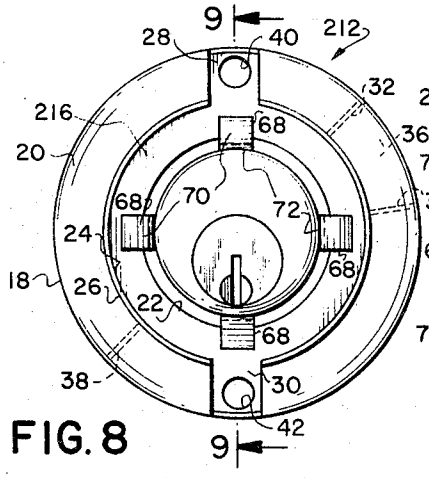


FIG. 8

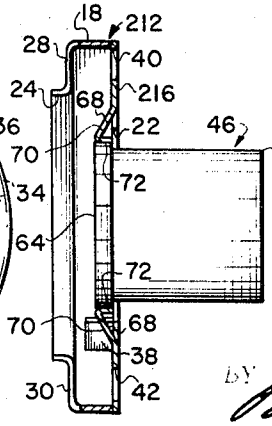


FIG. 9

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APPARATUS FOR PREVENTING ACCESS TO A LOCK MECHANISM

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ABSTRACT OF THE DISCLOSURE

An apparatus for preventing access to a door lock which includes a receptacle adapted to fit about the lock and a cap which is removably fastened to the receptacle. The receptacle comprises a rear wall and a front wall connected thereto by a peripheral wall. Aligned bores are provided in the front and rear walls so that when the rear wall is affixed to a door the door lock is positioned in the rear wall bore and access may be had to the lock through the front wall bore. The cap includes a rearwardly extending portion which slidably fits within the front wall bore. This portion is provided with a key-operated retractable arm which is adapted to be received in an open-ended slot in the receptacle when the arm is extended to prevent unauthorized removal of the cap thereby preventing access to the door lock.

This invention relates generally to an apparatus for preventing access to a door lock, and, more particularly, pertains to an apparatus which includes a receptacle adapted to lockingly mount a cap in overlying relationship to a door lock.

Hotels and similar establishments which rent rooms to guests are presented with a problem when they wish to prevent the guests from entering the rented premises or apartment. Since the guest normally retains the key to the door lock, it is the present practice for such establishments to either remove the lock and exchange it for another lock or to change the arrangement of the tumbler mechanism in the existing lock to prevent unauthorized entrance onto the premises. In either case, the procedure involved is time consuming and expensive, and, particularly in the latter case, requires the services of a skilled mechanic.

Accordingly, an object of the present invention is to provide an apparatus which is simple to attach to a door and which prevents acces to a door lock thereby eliminating the need for exchanging the door lock when it is desired to prevent entrance onto the premises by persons having a key to the door lock.

Another object of the invention is to provide an apparatus for preventing access to a door lock which is simple in construction and economic to produce.

A further object and feature of the present invention resides in the novel details of construction which provide an apparatus of the type described which does not require the services of a skilled mechanic to either affix the apparatus in place or to operate the apparatus.

Another object is to provide an apparatus which covers a door lock to prevent access to the door lock and which can be removed only by authorized personnel.

In furtherance of the above objects, the apparatus of the present invention includes a receptacle which is adapted to be mounted on a door and a cap which is lockingly mounted on the receptacle. The receptacle comprises a rear wall and a forwardly extending peripheral wall. A bore is provided in the rear wall which is sized and positioned to receive a door lock therethrough when the receptacle is mounted on a door. The cap includes a cover portion and a rearwardly extending portion which is adapted to be received in the receptacle. Fastening means are provided between the cap and the receptacle

for locking the cap on said receptacle to prevent unauthorized removal of the cap.

Other features and advantages of the present invention will become more apparent from a consideration of the following detailed description when taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a vertical sectional view of an apparatus constructed according to the present invention;

FIG. 2 is a perspective view of the receptacle portion of the apparatus;

FIG. 3 is a perspective view of the cap portion of the apparatus;

FIG. 4 is a front elevational view of a modified embodiment of an apparatus constructed according to the present invention, with parts broken away to clarify the relationship between the elements;

FIG. 5 is a bottom plan view of the receptacle shown in FIG. 4;

FIG. 6 is a front elevational view of a further modified embodiment of the receptacle portion of an apparatus constructed according to the present invention;

FIG. 7 is a sectional view thereof with the cap in position;

FIG. 8 is a front elevational view of a combination receptacle and door lock constructed in accordance with the present invention; and

FIG. 9 is a partial sectional view thereof taken along the line 9–9 of FIG. 8.

The apparatus of the present invention is shown in FIG. 1 and is designated generally by the reference numeral **10**. The apparatus **10** includes a receptacle **12** which is adapted to be mounted on a door in surrounding relationship to a door lock and a cap **14** which is adapted to be lockingly mounted on the receptacle **12**. More particularly, as hown in FIGS. 1 and2, the receptacle **12** includes a rear wall **16**, a circular peripheral wall **18** extending forwardly from the rear wall **16**, and a front wall **20** which is connected to the edge of the peripheral wall **18** and which overlies the rear wall **16**. Provided in the rear wall **16** and the front wall **20** are centrally located aligned bores **22** and **24**, respectively. The bore **24** in the front wall **20** is defined in part by a forwardly extending lip or flange **26**.

Defined in the lip **26**, the front wall **20**, and a portion of the peripheral wall **18** are opposed openings **28** and **30** which communicate with the bore **24** in the front wall. The openings **28** and **30** facilitate the insertion of the cap **14** into the receptacle **12** in the manner indicated hereinbelow.

Circumferentially spaced from the opening **28** in a clockwise direction are spaced partitions **32** and **34** which extend radially inwardly from the peripheral wall **18** and are located between the front wall **20** and the rear wall **16**. The end of the partitions are spaced from the bore **24**. The partitions **32** and **34** define the sides of an open-ended slot **36** within the receptacle **12**. As shown in FIG. 2, the open end of the slot **36** faces the bores **24** and **22**. Diametrically opposite the slot **36** is a partition **38** which similarly extends radially inward from the peripheral wall **18** between the walls **16** and **20** and which terminates adjacent to the bore **24**.

As shown in FIG. 1, respective apertures **40** and **42** are provided in the rear wall in alignment with the respective openings **28** and **30**. Fastening elements such as screws **44** extend through the apertures **40** and **42** and engage the front surface of the wall **16** to mount the receptacle **12** on a door and the like. More particularly, the receptacle **12** is adapted to be positioned on a door so that a conventional door lock mechanism, as indicated by the dashed lines in FIG. 1 and designated generally by the reference numeral **46**, is received through the rear wall bore **22**. The rear wall **16** is adapted to be in flush

abutment with the door 48, similarly shown by dashed lines in FIG. 1. In other words, the bore 22 is sized to receive the lock 46 therethrough.

The cap 14 is conventional in construction and is of the type of cap which is utilized to lock the gas pipe on a car. In other words, the cap 14 is a gas tank locking cap which is commercially available in any auto supply store and accordingly will not be described in detail herein. Only those portions of the cap necessary for an understanding of the present invention will be disclosed.

The cap 14 includes a cover 50 having a diameter substantially greater than the diameter of the bore 24. The cover 50 is provided with a circular recess 52 on the rear surface thereof. A rearwardly extending circular portion 54 is centrally located in the recess 52 and is sized to fit slidingly within the bore 24. Movable diametrically opposed radially extending arms 56 and 58 normally extend outwardly from the rear portion 54 adjacent the end of the cap. The arms 56 and 58 are movable between a normally extended position, as shown in FIG. 3, and a retracted position wherein the arms are withdrawn into the rear portion. As is conventional in this type of locking cap, the arms 56 and 58 may be moved to the retracted position by inserting a key in a key hole 60 (See FIG. 4) in the front surface of the cover 50 and turning the key relative to the cover.

In operation, the receptacle 12 is mounted on a door, such as the door 48, in the manner indicated above. In other words, the receptacle is positioned so that the lock 46 is received within the rear wall bore 22 and is accessible through the front wall bore 24. The receptacle may then be fastened in place by securing the fastening elements 44 in the door. It is to be noted that even with the receptacle 12 in place, the door lock mechanism 46 may be operated in the conventional manner to lock and unlock the door simply by inserting the key into the tumbler mechanism through the bore 24 in the front wall 20.

However, when it is desired to prevent access to the lock 46, the cap 14 is mounted on the lock in the following manner. The arms 56 and 58 are aligned with the respective openings 28 and 30 in the receptacle 12 and the portion 54 is inserted into the bore 24. The openings 28 and 30 are sized to easily receive the arms 56 and 58 therethrough to facilitate mounting of the cap 14 on the receptacle 12. The cap 14 is then rotated in the clockwise direction until the arm 56 abuts the partition 32 and the arm 58 abuts the partition 38. The key is inserted into the keyhole 60 in the lock and the mechanism is operated to retract the arms 56 and 58 into the portion 54, or at least sufficiently into the portion 54 so that the arms are no longer in contact with the respective partitions 32 and 38. Thereafter the cap 14 is rotated slightly in the clockwise direction until the arm 46 is opposite the open end of the slot 36. The key is then withdrawn from the keyhole 60 so that the arms 56 and 58 move to their normal extended position.

Accordingly, it will be appreciated that the arm 56 is now received in the open-ended slot 36 and that the cover 14 is locked in position on the receptacle 12. In other words, the arm 56 will abut the partitions 32 and 34 if someone attempts to rotate the cover to align the arms with the respective openings 28 and 30 thereby preventing the removal of the cover from the receptacle 12. Hence a person will not be able to unlock the door 48 even if they have a key for the door lock 46 since the door lock is not longer accessible.

Additionally, as noted hereinabove, the cover portion 50 has a greater diameter than the bore 24 and therefore extends beyond the lip 26 of the receptacle 12. The outer portion of the cover 50 is sized to overlie the fastening elements 44 so that the same cannot be removed when the cap 14 is mounted on the receptacle 12.

When it is desired to remove the cap 14 to allow acess to the door lock 46 the procedure outlined above is reversed. That is, the key is inserted into the keyhole 60 and the key is operated to retract the radially extending ing arms 56 and 58. When the arms have been retracted a sufficient distance so that they clear the partitions 32 and 38, the cover portion 50 of the cap 14 is rotated in the counter-clockwise direction so that the arm 56 moves beyond the open-ended slot 36. The key may then be removed from the keyhole 60 and the cover 14 may be removed from the receptacle 12 by aligning the arms 56 and 58 with the respective openings 28 and 30 and pulling the cap 14 outwardly. Thus, the operator will now have access to the door lock 46. Hence, only those people who have a key for the cap 14 will be able to gain access to the door lock 46.

Accordingly, an apparatus has been described which is simple in construction and arrangement which may be utilized to prevent access to a door lock by unauthorized personnel.

FIGS. 4 and 5 illustrated a modified embodiment of the receptacle portion of the invention. Accordingly, there is shown a receptacle 112 in FIGS. 4 and 5 which is similar in all respects to the receptacle 12 shown in FIGS. 1 and 2 with the exception that the rear wall extends beyond the peripheral wall 18 to provide a substantially square rear plate 116. The plate 116 is provided with an aperture 62 at each corner. The apertures 62 are adapted to receive fastening elements such as screws 44 therethrough to mount the receptacle 112 on a door with the lock mechanism of the door received through the bore 22 in the rear wall as noted hereinabove with respect to the receptacle 12. The receptacle 112 receives the cap 14 and lockingly mounts the same in the same manner as the receptacle 12.

FIGS. 6 and 7 show a further modified embodiment of an apparatus of the type described. In this embodiment the receptacle 312 includes a rear wall 316 having a plurality of aperture 350 which are adapted to receive fastening elements therethrough to securely mount the receptacle on a door. Centrally located in the rear wall 16 is a bore 322 which receives the door lock therethrough so that the lock is easily accessible.

A peripheral wall 318 extends forwardly from the rear wall 316 and terminates in a radially extending flange 320. Diametrically opposed slots 336 and 338 are provided in the peripheral wall 318. As shown in FIG. 7, the diameter of the receptacle 312 is substantially smaller than the cap 50 so that the entire receptacle is covered by the cap 14. That is, the flange 320 fits within the recess 52 in the cap.

In operation, the arms 56 and 58 of the cap 14 are moved to the retracted position in the manner noted above and the rearwardly extending portion 54 is inserted into the receptacle 312. The arms 56 and 58 are then aligned with the respective slots 336 and 338. Thereafter, the arms are moved to the extended position to securely lock the cap 14 in place thereby to prevent access to the door lock. Additionally, since the cover portion 50 of the cap extends beyond the receptacle, the receptacle will likewise be inaccessible when the cap is in place. Hence, it will be impossible for anyone to remove the receptacle 312 when the cap is mounted on the receptacle.

FIGS. 8 and 9 illustrate a further modified embodiment of the present invention which includes a receptacle 212 in combination with the conventional door lock 46. The door lock 46 includes a front collar or radial flange 64 and a rearwardly extending barrel 66. The receptacle 212 is similar to the receptacle 12 shown in FIGS. 1 and 2 and is adapted to lockingly mount a cap 14 in the same manner as the receptacle 12. However, the receptacle 212 further includes circumferentially equally spaced members 68 which are upstruck from the rear wall 216 of the receptacle 212 which are adapted to frictionally engage the collar 54 of the lock 46 to retain the lock in place.

More particularly, the members 68 each include a de-

formed section comprising a forwardly inclined portion **70** and a rearwardly extending portion **72**. The spacing between opposite members **72** is slightly smaller than the diameter of the collar or flange **64** so that the flange **64** will be tightly gripped between opposite members **68** which will retain the lock **46** in position. The lock **46** may be connected to a door in the conventional manner and the receptacle **212** may be mounted on the door by fastening elements such as screws **44** shown in FIG. 1 which would pass through the apertures **40** and **42** in the rear wall **216**.

While preferred embodiments of the invention have been shown and described herein, it will become obvious that numerous omissions, changes and additions may be made in such embodiments without departing from the spirit and scope of the present invention. For example, the lip **26** and the wall defining the recess **52** in the cover **50** may be threaded so that the cap **14** is threadedly mounted on the receptacle **12** in addition to being locked in place thereon.

What is claimed is:

1. Apparatus for preventing access to a lock mechanism mounted on a door and the like, including a receptacle and a cap therefor; said receptacle comprising a rear wall, a through bore in said rear wall sized and positioned so that a lock is accessible through said bore when said receptacle is mounted on a door, mounting means on said rear wall mounting said receptacle on said door with the lock positioned in said bore; said cap comprising a cover portion, and a rearwardly extending portion adapted to be received in said receptacle; and locking means between said cap and said receptacle for locking said cap on said receptacle to prevent unauthorized removal of said cap; a lock for a door and the like wherein said lock is provided with a front radial flange and a rearwardly extending barrel, said lock being positioned in said receptacle so that said barrel extends beyond said rear wall, and resilient means on said receptacle extending forwardly of said rear wall and engaging said lock in tight frictional engagement therewith to maintain said lock in position.

2. A device adapted to be used with a cap of the type having a cover portion and a rearwardly extending portion provided with opposed retractable arms for preventing access to a door lock and the like comprising a rear wall, and a forwardly extending peripheral wall connected to said rear wall, a bore in said rear wall adapted to receive a door lock therethrough, means on said rear wall mounting said device onto said door with the lock positioned in said bore, an open-ended slot in said device adapted to capture at least one arm of the cap when the arm is extended to prevent removal of the cap from said device, said device further including a front wall connected to said peripheral wall, a bore in said front wall positioned to allow access to a door lock received in said rear wall bore and sized to slidingly receive the rearwardly extending portion of a cap therethrough, and a door lock of the type having a front radial flange and a rearwardly extending barrel, said lock being positioned in said device so that said barrel extends beyond said bore in said rear wall, and friction means on said rear wall forming an aperture slightly smaller than said flange and being in tight frictional engagement with said flange to maintain said lock in position.

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U.S. Cl. X.R.

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