SECURITY BAR LOCK ASSEMBLY

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ABSTRACT

A security lock assembly for securing relatively movable closure members comprising a pair of bar guide brackets fixed on a wall of one of the members and a reciprocable bar slidably mounted within the brackets for movement into locking engagement with a keeper on the other member. The brackets have central bar guide portions which space the bar outwardly away from the wall so that a removable padlock may be inserted through an opening in the bar for abutment with one of the brackets and thereby prevent unauthorized or inadvertent unlocking movement of the bar from the keeper. A limiting stop pin projects inwardly from the bar toward the wall to prevent complete withdrawal of the bar from the bracket as it is moved to its unlocking position.

6 Claims, 2 Drawing Figures
SECURITY BAR LOCK ASSEMBLY

BACKGROUND OF THE INVENTION

This invention relates generally to security lock systems used in preventing unauthorized opening of various type closures such as doors and windows, or the like. More particularly, the invention is concerned with a novel, simply constructed security bar lock assembly especially useful for providing maximum security against unauthorized entry through an industrial garage or warehouse doors, with the assembly being mountable on either the inside or outside of the doors as dictated by the particular application.

In the past, many types of securing locks have been proposed, but those which were intended to provide a maximum degree of security against burglaries have generally been quite complicated structurally and, as a result, quite expensive. In addition, many of those have been susceptible to tampering by a burglar who then may gain easy access to the building or room being protected.

SUMMARY OF THE INVENTION

Accordingly, a primary object of this invention resides in the provision of a novel security bar lock assembly which is very simply constructed, but yet is substantially tamperproof to provide maximum security against unauthorized entry into protected areas.

Another object resides in the provision of a novel security bar lock assembly for a pair of cooperating closure members, the assembly including a pair of bar guide brackets fixed on the wall of one of the members and a solid, rigid bar slidably mounted on the bracket for movement into locking engagement with a keeper fixed on the other closure member. A removable lock means is connected to the bar to prevent unauthorized unlocking disengagement of the bar from the keeper and a stop pin is mounted on the bar to prevent complete withdrawal of the bar from the brackets as it is moved to its unlocking position after the removable lock means has been removed.

Still another object resides in the provision of a novel security bar lock assembly as described in the above objects, with the brackets having bar guide portions spaced from the wall to slidably support the bar outwardly from the wall to enable the shackle of a padlock to be readily inserted through an opening in the bar, the padlock thereby abutting against one of the brackets and preventing unauthorized withdrawal of the bar from its locking position.

Other objects and advantages of the invention will become apparent from a reading of the following detailed description of a preferred embodiment of the bar lock assembly with reference to the accompanying drawings in which like numerals indicate like parts. It is understood, however, that the scope of the invention is limited only by the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front elevation view of the novel bar lock assembly of the invention as it would appear in its locked position mounted on the inside walls of cooperating closure members, such as a door and door jamb;

FIG. 2 is a top plan view of the assembly shown in FIG. 1;

FIG. 3 is a fragmentary end elevation view taken along lines 3-3 of FIG. 1;

FIG. 4 is a fragmentary section view taken along lines 4-4 of FIG. 1 and particularly illustrating the stop pin for preventing complete withdrawal of the bar from its guide brackets; and

FIG. 5 is a fragmentary section view taken along lines 5-5 of FIG. 1 particularly illustrating the opening in the bar through which the shackle of the padlock may be inserted.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

Referring now to the drawings, the bar lock assembly 10 is shown in its locked position mounted on the inside wall 11 of a door 12 for preventing opening movement of the door relative to door jamb 14 and unauthorized entry into the warehouse or room area protected.

Assembly 10 includes a pair of identical, laterally spaced heavy duty, cast metal brackets 16 and 18 having end flanges 20 which are flush against and bolt connected to door 12 by carriage bolt assemblies 22. For the illustrated inside mounting arrangement the carriage bolt heads are on the outside of the door to prevent turning of the bolts by a burglar.

Brackets 16 and 18 include central raised offset sections 24 and 26 respectively spaced outwardly from the door wall, with sections 24 and 26 having rectangular bar guide slots 28 and 30 respectively, laterally aligned with each other and with a keeper slot 32 extending through a conventional type keeper plate 33 into door jamb 14.

A rigid, solid, non-yieldable rectangular, cold-rolled steel bar 34 is reciprocably mounted in slots 28 and 30 with a close, but free sliding fit for movement between the locking position shown in FIG. 1 and a withdrawn unlocking position in which the leading end 35 of the bar will be withdrawn from keeper slot 32.

As best illustrated in FIGS. 2 and 4, bar 34 is spaced outwardly from wall 11 and has a handle 36 fixed adjacent its trailing edge 38 and has an opening 40 located at a predetermined distance from edge 38 so that, when the bar 34 is in its locked position of FIG. 1 with its leading edge within keeper slot 32, hole 40 is stationed exterior of and to the left of bracket section 24. A removable key operated padlock 42 has its shackle 44 inserted through opening 40, and when it is locked it prevents unauthorized withdrawal of bar 34 from keeper slot 32, since movement of the bar to the left will be prevented by abutment of the shackle 44 against guide section 24 of bracket 16.

Insertion and removal of shackle 44 from opening 40 is facilitated by the fact that bar 34 is spaced from wall 11 and also by the specific formation of opening 40, which, as shown in FIG. 5, has its end portions chamfered or beveled outwardly.

A small rolled metal stop pin 46 is fixed to bar 34 and has an end projecting inwardly therefrom toward wall 11 to abut against guide section 24 when padlock 42 is removed and bar 34 is withdrawn from keeper slot 32 to its unlocking position.

Pin 46 prevents complete removal of bar 34 from brackets 16 and 18 and thereby prevents inadvertent loss or separation of the bar from the remainder of the lock assembly. The stop pin is deliberately made inaccessible by projecting it inwardly toward wall 11 to prevent tampering with or shearing of the pin and complete withdrawal of the bar.

As indicated previously, the bar lock assembly 10 may be mounted inside or outside of door 12 and has been described above as mounted on the inside wall of the door. To mount the assembly on the outside wall of door 12, the brackets 16 and 18 and bar 34 will be positioned in the same manner, however, the carriage bolt heads will directly engage bracket flanges 20 and the nut end of bolt assemblies 22 will still be located inside the door.

From the above description it is apparent that the bar lock assembly of the invention is very simple structurally but yet is of a heavy duty construction capable of providing maximum security for protected areas.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiments are therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.
What is claimed and desired to be secured by Letters Patent is:

1. A security lock assembly for two relatively movable closure members comprising a bar lock mechanism adapted to be mounted on one of said members for retaining engagement with keeper means mounted on the other of said members, said bar lock mechanism including a pair of spaced brackets, each having a pair of end flanges for connection to a wall of said one member and a central offset bar guide section spaced outwardly from the wall engaging surfaces of said flanges, said bar guide sections of said brackets having bar guide slots aligned with each other, a rigid bar slidably mounted in said guide slots for reciprocation between a withdrawn unlocking position and a locking keeper engaging position, an opening in said bar adjacent to, and exterior of, one of said brackets when said bar is in keeper engaging position and movable into said bracket as said bar is withdrawn to unlocking position, removable key-operated lock means insertable through said opening for preventing movement of said bar from said locking position, and a stop pin fixed to said bar and having a stop end projecting inwardly from said bar for abutment with one of said central bar guide sections to limit withdrawal of said bar from its locking position when said removable lock means has been removed.

2. A security lock assembly as defined in claim 1, wherein said bar and bar guide slots are rectangular in shape.

3. A security lock assembly as defined in claim 2, wherein said brackets are a heavy duty cast metal and said bar is cold rolled steel.

4. A security lock assembly as defined in claim 1, said end flanges of said brackets being adapted to be connected to said one member by carriage bolt assemblies extending through said one member with the heads of the carriage bolts being positioned on the wall of said one member which would be most accessible to an unauthorized person.

5. A security lock assembly as defined in claim 1, said opening having its ends bevelled, said removable lock means being a padlock whose shackle is insertable through said opening, whereby insertion of said shackle through said opening is facilitated by the bevelled ends of said opening and the spacing of said bar outwardly of the wall engaging portions of said flanges.

6. A security lock assembly as defined in claim 1, comprising a handle fixed on said bar for facilitating movement of said bar.