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RELEASABLE WINDOW GUARD**BACKGROUND OF THE INVENTION**

This invention relates generally to security gratings for windows, and in particular to a quick-release security guard assembly for indoor installation.

Security gratings of various designs are intended to prevent intrusion and to improve the exterior appearance of homes and business establishments. In many cases, external security bars installed on doors and windows have prevented families from escaping a fire and have impeded rescue attempts by firefighters. When security bars are installed externally, rescue personnel must use the "jaws of life" or the K-12 saw to remove the bars. In some installations, it is necessary to pull the bars with a chain and fire truck during structural fires. These methods have proven to be too slow, sometimes with tragic results. Although the trend of fire deaths in general is decreasing, fire deaths relating to permanent security bar installations are on the rise.

Security bars, when installed on the inside without quick-release mechanisms, can trap the occupants during fires and make rescue impossible. This has led to government regulations that prohibit the installation or maintenance of security bars on any residential dwelling if they will not open from the inside. When installed on the inside, security bars are still considered unsafe if they require a key, special training, a separate tool or extra physical effort to open. Many building codes require that security bars when installed over exit doors or windows of sleeping rooms must be equipped with a quick-release device that allows them to be opened quickly from the inside without the use of special equipment, special knowledge or unusual physical effort.

When properly installed, removable security bars are highly effective deterrents to intrusion through windows and door openings. Preferably, the security bar assembly is installed on the interior side of the window or doorway, and can be removed by a simple means such as a latch or foot pedal release. All mounting hardware, including the release mechanism, should be concealed or obscured from view from the outside. Moreover, the release mechanism should be easy to locate and operate under conditions of darkness, i.e., in a smoke-filled room with zero visibility.

BRIEF SUMMARY OF THE INVENTION

The quick release security guard assembly of the present invention is intended for installation in a protective position adjacent a window opening in a building structure, for example a window in a sleeping room of a residential dwelling. The security guard assembly includes a metal retention frame that is dimensioned for attachment inside the window frame bordering the window opening. A removable security grating is coupled to the retention frame by a hinge assembly which permits swinging movement of the security grating from a closed position that blocks intrusion, to an open position allowing emergency exit through the window opening. The security grating is held in the closed position by a quick release latch assembly. The latch assembly is locked by an actuator arm that is held in place by the force of gravity in locking engagement with latch receivers carried by the retention frame and the security grating. The latch receivers are held in latching alignment with each other when the security grating is in the closed position. The latch assembly is released simply by lifting the actuator arm out of engagement from the latch receivers, allowing the security grating to be swung open to the emergency exit position.

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In the preferred embodiment, the actuator arm includes a handle that overlaps the retention frame when the security grating is in the closed position, whereby the handle is readily accessible to an occupant inside the building, but the handle is concealed and cannot be observed through the window opening from a location external of the building. A utility hook is attached to the handle and overlaps the window opening at an easy-to-find location relative to the window opening when the security grating is closed and the actuator arm is in the locked position. By this arrangement, the utility hook and handle can be quickly located and operated by the occupant to release the latch during an emergency that may arise during hours of darkness or when the room is filled with smoke under zero visibility conditions.

The utility hook can be used in the conventional way to suspend ornamental objects or living plants in the window space. When so used, the utility hook does not give away the presence of the releasable security grate or the latch assembly. If the installation includes an additional window opening, a fixed security grating is installed over the additional window opening and a fixed utility hook is also installed at a corresponding location on the fixed security grating, thereby providing a uniform appearance when viewed externally. By this arrangement, a potential intruder would not have any basis to differentiate one window with respect to the other, and thus would not be likely to notice the location of the releasable security grating or the release apparatus.

BRIEF DESCRIPTION OF THE DRAWING

The accompanying drawing is incorporated into and forms a part of the specification to illustrate the preferred embodiments of the present invention. Various advantages and features of the invention will be understood from the following detailed description taken in connection with the appended claims and with reference to the attached drawing figures in which:

FIG. 1 is a front perspective interior view of a security guard assembly installed in a protective, locked position adjacent a window opening in a building structure;

FIG. 2 is a perspective view of a releasable security grating and latch assembly which form a part of the quick release security guard shown in FIG. 1;

FIG. 3 is a perspective view of the security grating, shown in the released, swing-away emergency exit position;

FIG. 4 is a perspective view of a fixed security grating which overlies a portion of the window opening shown in FIG. 1; and

FIG. 5 is a front elevational view of the security guard assembly as viewed by an observer looking through the window opening from a location external of the building structure.

DETAILED DESCRIPTION OF THE INVENTION

Preferred embodiments of the invention will now be described with reference to various examples of how the invention can best be made and used. Like reference numerals are used throughout the description and several views of the drawing to indicate like or corresponding parts.

Referring now to FIG. 1, a window guard **10** constructed according to the present invention is installed in a protective position adjacent a window opening **12** formed in a building structure **14**. In the illustrated embodiment, the building