

June 12, 1934.

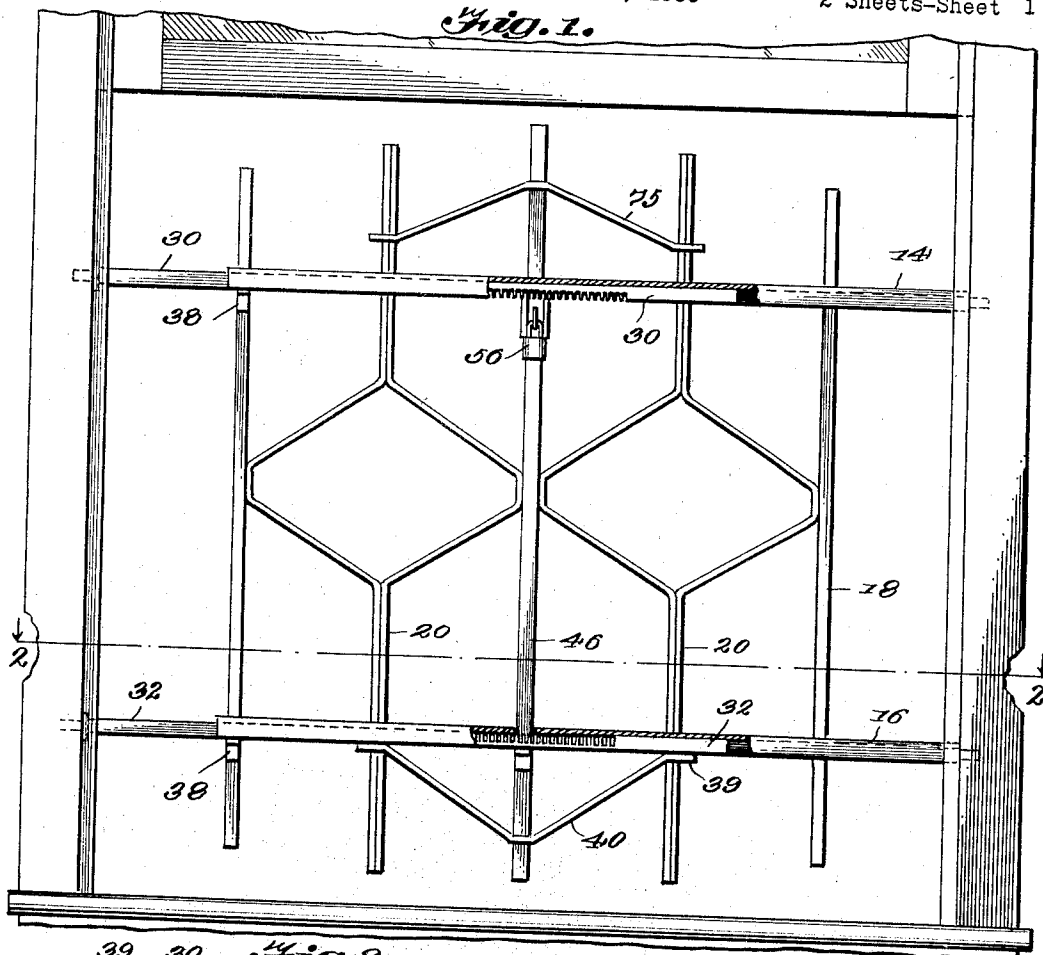
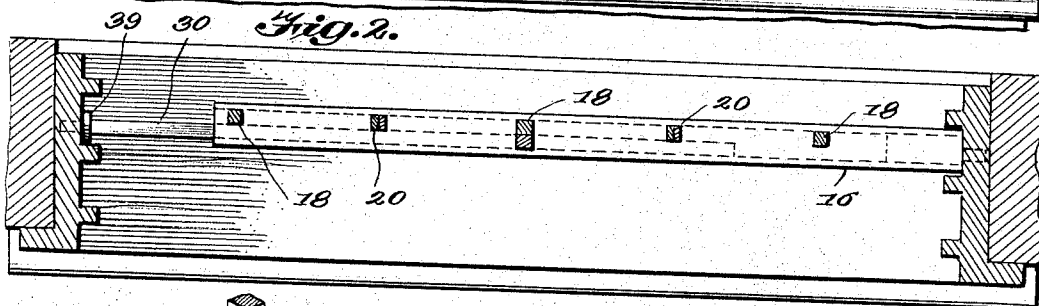
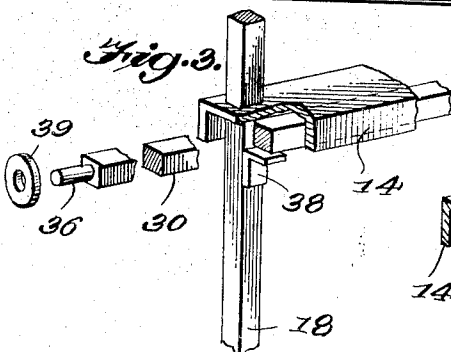
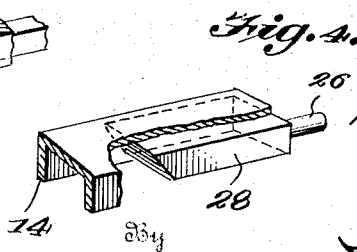
F. P. MILLER

1,962,569

WINDOW GUARD

Filed June 1, 1933

2 Sheets-Sheet 1



Inventor
FRANK P. MILLER

H. Quesada
Attorney

June 12, 1934.

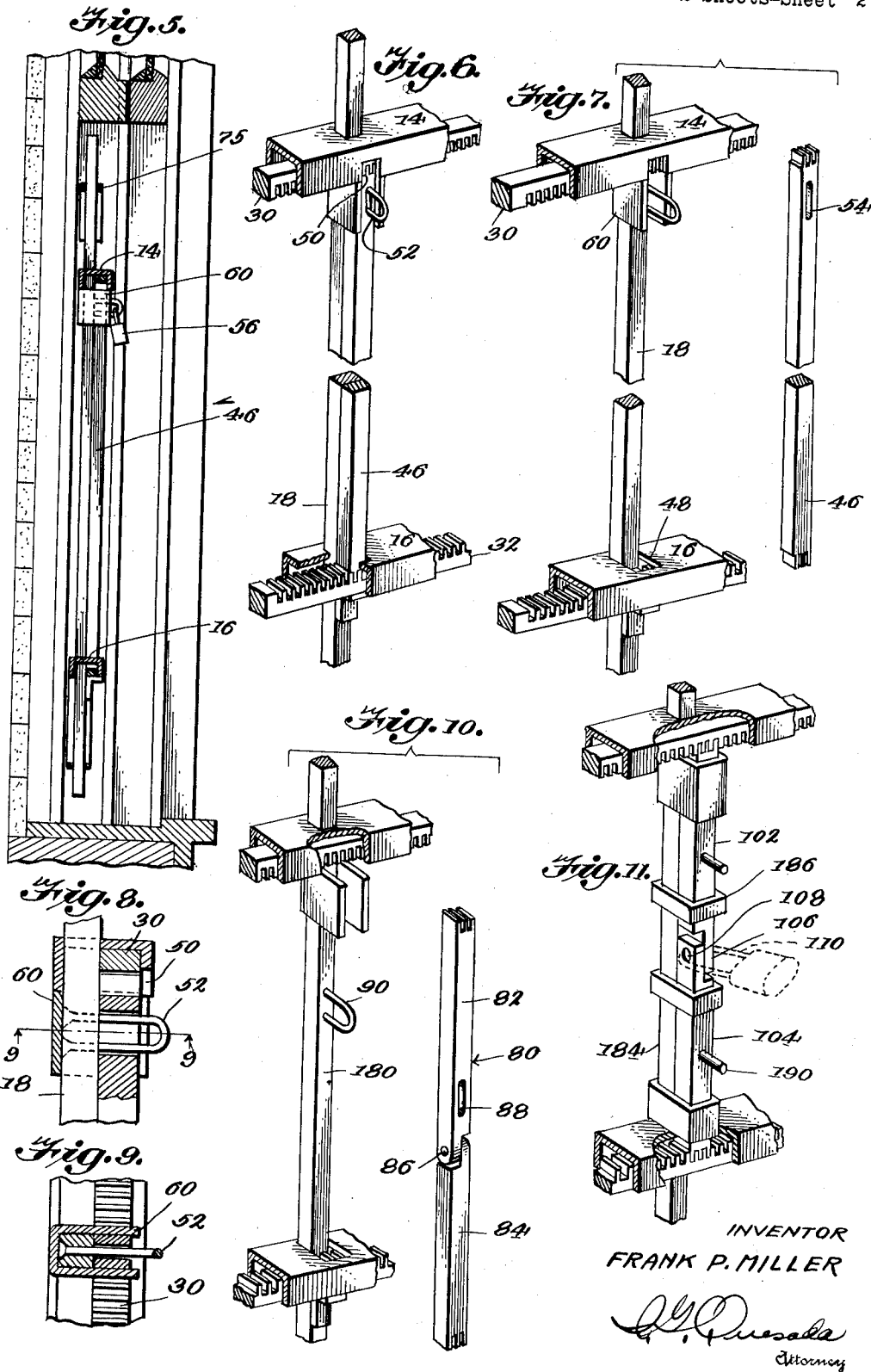
F. P. MILLER

1,962,569

WINDOW GUARD

Filed June 1, 1933

2 Sheets-Sheet 2



UNITED STATES PATENT OFFICE

1,962,569

WINDOW GUARD

Frank P. Miller, Meadville, Pa.

Application June 1, 1933, Serial No. 673,912

11 Claims. (Cl. 20—71)

This invention relates to guards especially adapted for use in windows to afford protection against thieves and prowlers and to prevent persons, particularly small children, from falling through open windows.

The invention forming the subject of this application contemplates a guard which may be installed in a window frame in a highly convenient and expeditious manner and which when applied, offers security against house-breaking and prevents children who may be playing near the window, from accidentally falling through the window, the invention being especially useful in this latter regard in the windows of upper stories of private homes and apartment houses.

The invention further contemplates a novel locking arrangement by which the guard is made adaptable to windows of various sizes within a rather wide range and by which the guard is held securely in place.

Another object of the invention is to provide a guard of the character specified which is of highly simplified construction, durable in use, and relatively cheap to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a side elevation of the improved guard applied, parts being shown in section.

Figure 2 is a horizontal sectional view taken on line 2—2 of Figure 1.

Figure 3 is a fragmentary group perspective illustrating the connection between a lock bar and the supporting means therefor.

Figure 4 is a fragmentary perspective illustrating the relation between one of the rails and an associated attaching pin.

Figure 5 is a vertical transverse sectional view through the improved guard applied.

Figure 6 is a fragmentary perspective view illustrating the means by which the guard is held in an adjusted and locked position.

Figure 7 is a similar view with the locking element removed.

Figure 8 is a detail vertical sectional view through the locking and securing means embodied in the guard.

Figure 9 is a horizontal sectional view taken on line 9—9 of Figure 8.

Figure 10 is a fragmentary group perspective illustrating a slight modification of the invention.

Figure 11 is a fragmentary perspective illustrating another modification of the locking means for the improved guard.

In the drawings, the numerals 14 and 16 designate upper and lower rails, respectively. These rails are shown to be channel-shaped in cross-section and have the flanges thereof presented downwardly so that the accumulation of dirt, leaves, etc., in the channel of the rails is prevented.

As shown in Figures 1 and 2, a plurality of spaced parallel pickets 18 and 20 are extended through squared openings in the upper and lower rails and are welded or otherwise secured in position producing a rigid framework affording the desired protection.

It is illustrated in Figure 1, that each intermediate picket designated by the numeral 20, may be in the nature of two strips located side-by-side and having substantial portions of the opposed surfaces flatly in contact and welded or otherwise joined, while the intermediate portions of such strips extend outwardly into engagement with the outer and center pickets 18. At such points, the pickets 18 and 20 may be welded together or otherwise united for mutual bracing purposes.

From Figure 4, it will be seen that each channel member or rail is provided at what might be said to be the outer end portion thereof with an attaching pin 26 having a diametrically enlarged inner end portion forming an attaching block 28 snugly fitted within the adjacent channel and secured in place by welding, riveting or other suitable means. It is preferred that each block 28 shall fill completely the adjacent end portion of the channel within which it is located.

Referring now to Figures 1, 2, 3 and 6, it will be seen that the several rails 14 and 16 carry lock bar members 30 and 32 having the outer portions thereof rounded as indicated at 36 to fit within suitable sockets in the window frame, just as do the attaching pins 26. In Figure 3 it is illustrated that washers or annular bearing elements 39 are pressed upon the pins 36 to provide a generous area of contact with the window frame after the fashion suggested in Figure 2. In this connection, it will be observed that the shoulders formed between or at the point of connection of the pins 26 and the attaching blocks 28 thereof provide generous contact surfaces between the rails and the window frame. The blocks 28 are flush with the ends of the rails 14 and 16 and in this manner provide a substantial area of contact between the rails and the frame.

With further reference to the bars 30 and 32 it

is pointed out that the same are positioned within the channels of the rails and are held therein by L-shaped lugs 38 and in the case of the lower locking bar 32, the same is engaged by the angularly extending end portions 39 of a more or less V-shaped bracing and ornamental bar 40 and the engagement of the portions 39 with the under side of the locking bar 32 assists in holding the bar within the channel of the associated rail 16. Incidentally, the bracing member 40 has a central opening receiving the center picket 18 and the angularly extending end portions 39 of the member 40 are formed with openings snugly receiving the pickets 20. At the point where the center picket 18 and a contiguous picket 20 extend through the bracing member 40, the meeting parts are joined by welding or other suitable means.

In Figures 3 and 6, it is clearly shown that the locking bars 30 and 32 are less in width than the channels in which the same are positioned and that such locking bars extend along the sides of the adjacent pickets.

From the foregoing, it will be seen that the upper and lower rails are in effect, extensible allowing the guard to be installed in windows of different sizes within a generous range. For the purpose of securing the guard in an adjusted and locked position within the window frame after the manner suggested in Figure 1, the opposed sides of the horizontally extending lock bars 30 and 32 will be found to be provided with teeth, the teeth in the lower locking bar 32 being adapted for interlocking engagement with the teeth at the lower portion of a vertically positioned locking bolt 46. It is shown in Figures 6 and 7, that the lower rail 16 is provided with a rectangular opening 48 for the reception of the lower portion of the upright locking bolt 46 so that when the bolt is passed through this opening and is brought into interlocking engagement with the lower horizontally movable locking bar 32, disengagement of the interlocking teeth will be prevented.

The upper end portion of the upright locking bolts 46 is provided with teeth adapted to be brought into interlocking engagement with the teeth on the under side of the upper horizontally movable locking bar 30. The inner flange of the upper channel member 14 is notched as indicated at 50 for the passage of the upper portion of the locking bolt 46 and immediately below said notch the central picket 18 is provided with a U-shaped shackle 52 adapted to be passed through an opening 54 in the locking element 46 for connection with a padlock 56 or the equivalent thereof, by which the guard is secured in a locked position in a window frame.

It is clearly shown in Figures 6 and 7 that a U-shaped retainer 60 extends about the sides of the central picket 18 opposite the shackle 52 and engages the sides of the locking bolt 46 to cooperate with the shackle in securing the locking bar against movement.

It is preferred that the U-shaped retainer 60 shall be welded at the right portion and at the sides thereof to the adjacent portion of the central pickets or otherwise secured thereto. The retainer 60 may also be welded or otherwise attached to the lower edges of the flanges of the upper rail 14 and cooperates with the members 38 in slidably supporting the upper locking bar 30. It is shown in Figure 9 that the right portion of the retainer 60 extends over the riveted ends of the U-shaped shackle 52 so as to conceal the same and prevent tampering therewith.

The first step looking to the installation of the improved window guard in the window frame is to provide the sides of the window frame at appropriate points of course, with openings or sockets for the reception of the end members 26 and 36. When this has been done it is a simple matter to mount the guard in the window frame so as to position the end members 26 in the mating openings thereof and then extend the slidable members 30 and 32 to introduce the end portions 36 into the mating openings thereof. When this has been done it is necessary to mount the lower portion of the locking bolt or member 46 in the socket 48 and then swing or rock the upper end of the member 46 into interlocking engagement with the teeth of the upper locking bar 30, all of which is clear from a study of Figure 6. It is a simple matter to now engage the padlock or equivalent locking means with the shackle 52 so as to hold the slidable members 30 and 32 in the extended positions thereof.

When in place, the guard provides a convenient and reliable means by which a window may be allowed to remain open without allowing entry of prowlers and at the same time preventing children or others from accidentally falling through the open window frame.

The arrangement of the intermediate pickets 20, the lower brace 40 and the upper brace 75 provide a rigid and yet ornamental arrangement which fits harmoniously in a window frame.

In the form of invention illustrated in Figure 10, the upright locking bar is generally designated by the numeral 80, and embodies upper and lower hinged or pivotally connected sections 82 and 84, the adjacent portions of which are reduced in width and are overlapped for pivotal connection by a pivot element 86. The upper section 82 is shown to be provided with an opening 88 adapted for the reception or passage of a shackle 90 carried by the intermediate portion of a picket 180, the other parts of the guard being not unlike the illustration in Figures 1 to 9.

It is believed to be clear that in applying the locking bar 80 it is a simple matter to engage the ends thereof with the upper and lower locking bars so as to cause the shackle 90 to extend through the opening 88 after which a padlock is engaged with the shackle so as to lock the guard in its extended position.

In the form of invention illustrated in Figure 11, the locking bolt is in the form of two slidably connected sections 102 and 104 having the meeting portions thereof reduced in width to form overlapping ears 106 having transverse openings 108 for the reception of the locking element of a padlock 110. It is clearly shown in Figure 11, that the locking sections 102 and 104 are slidably attached to a picket 184 by sleeves 186, which sleeves are welded or otherwise secured to the picket. The pins 190 carried by the upper and lower sections 102 and 104 respectively, provide for the convenient sliding movement of the locking sections when released.

To release the locking mechanism shown in Figure 11 the bolt sections 102 and 104 are retracted, increasing the overlap of these sections and it will be seen that the adjacent portions of these sections are cut away sufficiently to allow of this.

On the other hand, to apply a guard embodying the locking mechanism shown in Figure 11, the horizontally movable toothed locking bars are moved outward to engage the ends of the rails

and the locking bars with the window frame, after which the locking sections 102 and 104 are advanced into locking engagement with the toothed locking bars. This brings the openings 5 in the overlapping sections 102 and 104 into registration for the application of the padlock, causing the rails to be secured in the adjusted position so as to hold the guard against removal.

The foregoing illustrates that the invention 10 forming the subject of this application is capable of a wide variety of mechanical expressions and therefore it is to be understood that the forms of invention herewith shown and described are to be taken merely as preferred examples of the 15 same, and that such minor changes in arrangement and construction of parts may be made as will remain within the spirit of the invention and the scope of what is claimed.

What is claimed is:

20 1. In a window guard, a rail embodying slidably connected telescoping sections, one of said sections being provided with teeth, pickets rigidly connected to said rail, a locking bar associated with one of said pickets having one end portion 25 thereof provided with teeth for interlocking engagement with said first named teeth, a shackle rigidly connected to one of said pickets, said locking bar being provided with an opening for the passage of said shackle, and a lock engaged with 30 said shackle and having means securing the locking bar in a predetermined position with respect to one of said pickets.

35 2. In a window guard, a rail embodying slidably connected telescoping sections, one of said sections being provided with teeth, pickets rigidly connected to said rails, a locking bar having one end portion thereof provided with teeth for interlocking engagement with said first named teeth, 40 a shackle rigidly connected to one of said pickets, said locking bar being provided with an opening for the passage of said shackle, a second rail having rigid connection with said pickets and being provided with an opening snugly receiving one end portion 45 of said locking bar, said second rail being provided with an extensible section provided with means for interlocking engagement with said locking bar.

50 3. In a window guard, a rail embodying slidably connected telescoping sections, one of said sections being provided with teeth, pickets rigidly connected to said rails, a locking bar having one end portion thereof provided with teeth for interlocking engagement with said first named teeth, 55 a shackle rigidly connected to one of said pickets, said locking bar being provided with an opening for the passage of said shackle, a lock engaged with said shackle, and a U-shaped retainer embracing one of said pickets at opposite 60 sides of said shackle and located at opposite sides of said locking bar to cooperate with the lock in securing the locking bar in place, said retainer being in supporting and retaining relation to one of said sections of said rail.

65 4. In a guard for window frames, upper and lower rails having channels, lock bars slidable in said channels, said locking bars of said rails being provided with means to engage a window 70 frame, pickets rigidly secured to said rails, a locking bolt having teeth at opposite ends thereof, the opposed sides of said locking bars being provided

with teeth for selectively interlocking with the teeth of said locking bolt, and means to secure said locking bolt closely against one of said pickets.

5. In a guard for window frames, upper and 80 lower rails having channels, lock bars slidable in said channels, said locking bars of said rails being provided with means to engage a window frame, pickets rigidly secured to said rails, a locking bolt having teeth at opposite ends thereof, 85 the opposed sides of said locking bars being provided with teeth for selectively interlocking with the teeth of said locking bolt, and means to secure said locking bolt closely against one of said 90 pickets, one of said rails being formed with an opening snugly receiving said locking bolt and holding the same against lateral movement.

6. In a window guard, a plurality of rails, pickets rigidly secured to the rails, locking bars 95 slidably carried by the rails, and a locking element embodying a pair of pivotally connected sections having means at the ends thereof for selective locking engagement with said locking 100 bars, a shackle carried by one of said pickets, and a lock for engaging said shackle and having means for securing said locking element in an operative position.

7. In a guard for windows, a plurality of rails, locking bars slidably carried by the rails, pickets 105 connected to the rails, a locking bolt slidably carried by one of the pickets and embodying a pair of overlapping slidably connected sections, the outer end portions of said sections being provided with means for selective interlocking 110 engagement with said locking bars, the inner portions of said sections being slidably overlapped and having openings for registration, and a lock having means passing through said openings.

8. In a guard for use in window frames, upper 115 and lower horizontally arranged extensible rails, pickets secured to said rails, a rigid one-piece vertically arranged locking bolt having means for engaging said upper and lower rails to lock each rail in a predetermined position, and means 120 to secure said locking bolt in place.

9. In a guard for use in window frames, upper 120 and lower horizontally arranged extensible rails, pickets secured to said rails, a rigid one-piece vertically arranged locking bolt having means at the ends thereof for detachably en- 125 gaging said upper and lower rails to lock each rail in a predetermined position, and means to secure said locking bolt in place.

10. In a guard for use in window frames, upper 130 and lower horizontally arranged extensible rails, pickets secured to said rails, a rigid one-piece vertically arranged locking bolt having means for engaging said upper and lower rails to lock each rail in a predetermined position, 135 and means to secure said locking bolt in place parallel to one of said pickets.

11. In a guard for use in window frames, upper 140 and lower horizontally arranged extensible rails, pickets secured to said rails, a rigid one-piece vertically arranged locking bolt having means for engaging said upper and lower rails to lock each rail in predetermined position, and means to secure said locking bolt in place parallel to one of said pickets, and in engagement 145 therewith.

FRANK P. MILLER.