

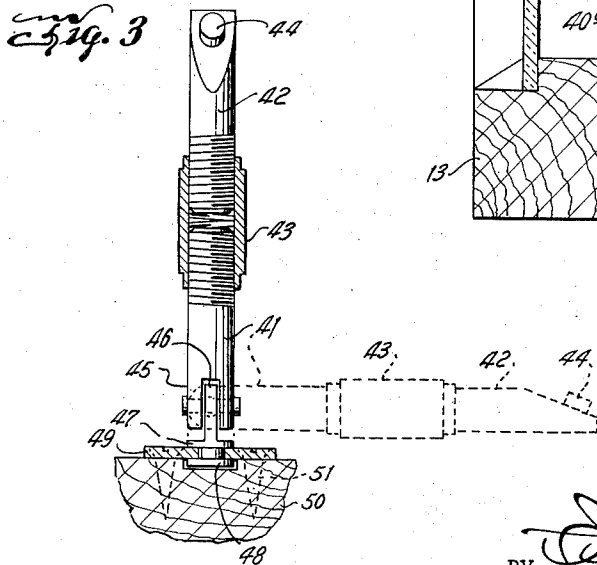
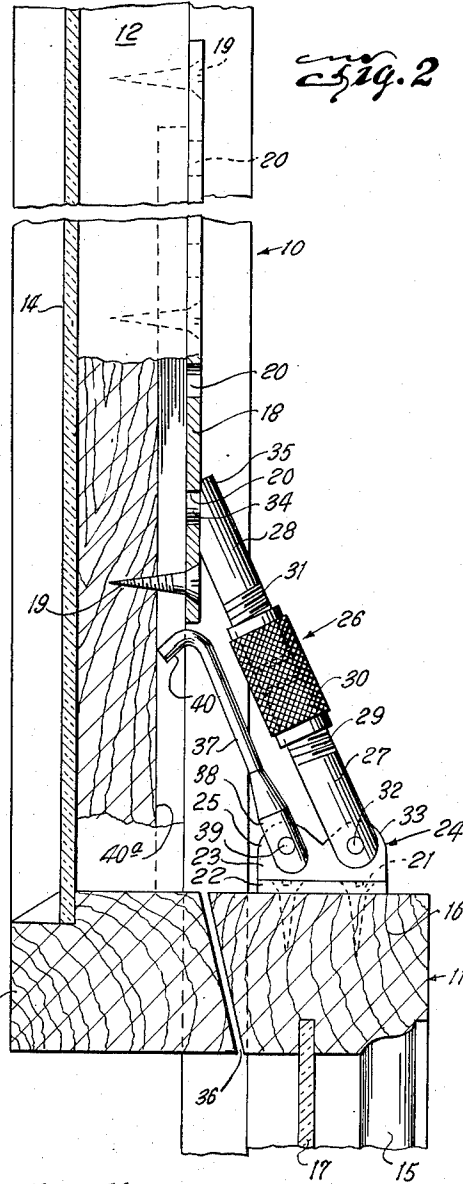
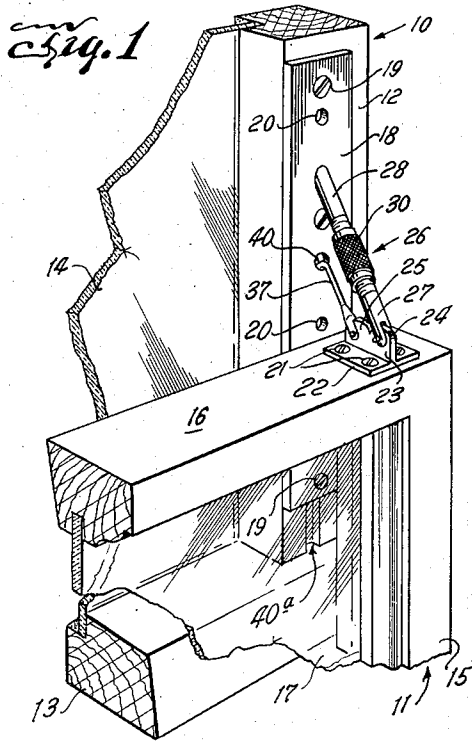
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WINDOW SASH LOCK

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WINDOW SASH LOCK

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5 Claims. (Cl. 292—3)

This invention relates to window sash frame locks and more particularly to such locks as designed to secure sashes in closed or partially open positions.

The principal object of the invention is to provide a sash lock which is both sturdily constructed and simple to operate but most important, the lock is highly effective to discourage intrusion by virtue of means for holding the lower sash of a window in a preselected position in relation to the upper sash and cooperative means in the nature of a safety latch which prevents disengagement of the sash holding means by an instrument thrust upwardly between the meeting rails of the two sliding sashes, the said holding means being longitudinally extensible to maintain tension on the safety latch to prevent displacement of the latter also from its operatively secured position.

Another object of the invention is to provide a sash lock of the character set forth which consists generally of an elongate keeper plate adapted to be secured to one vertical member of the upper sash frame, a longitudinally extensible lock bar pivoted at one end to a bracket adapted to be attached to the top of the lower sash frame to enable the upper end of the lock bar to selectively engage longitudinally spaced apertures in the keeper plate to hold the lower sash either in closed or partially open positions, said lock bar being supplemented by a latch pivoted also to the bracket and engageable selectively with the same apertures in the keeper plate but below the aperture retaining the lock bar, thus to prevent dislodgement of the latter from the keeper plate.

Other objects will appear as the description proceeds when considered with the annexed drawing, wherein:

Figure 1 is a fragmentary perspective view of a double hung, sliding sash type window showing the invention installed thereon.

Figure 2 is a fragmentary vertical sectional view of the window on a larger scale showing a side elevational view of the invention installed thereon, and

Figure 3 is a view of the lock bar per se showing a slight modification in the manner of mounting the same.

Continuing with a more detailed description of the drawing, reference numeral 10 denotes generally the upper sash of a window and 11, the lower sash thereof, the sashes being relatively slidable in a window sash frame, not shown. The sash 10 has vertical frame members 12, one of which is shown, a meeting rail 13 and glass pane 14. The lower sash 11 has vertical frame members 15, one of which is shown, a meeting rail 16 and a glass pane 17.

The invention consists of an elongate keeper plate 18 which is secured, by means of screws 19 to the inner surface of one of the vertical frame members 12 of the upper sash 10. The plate 18 is provided intermediate its side edges with a longitudinal row of equidistantly spaced holes 20. These holes may be either round or square, as desired.

Secured by screws 21 to the meeting rail 16 of the lower sash and in alignment with the keeper plate 18 is a bracket

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22 on which is formed a flange 23 shaped to define a pair of upstanding ears 24 and 25.

A lock bar, generally indicated by reference numeral 26 is composed of a pair of axially aligned sections 27 and 28. One end 29 of the section 27 is formed with a left hand thread and enters a correspondingly threaded end of a knurled coupling sleeve 30. The confronting end 31 of the section 28 of the lock bar is formed with a right hand thread and enters the opposite end of the coupling sleeve 30 which is also provided with right hand threads. In this manner, rotation of the sleeve 30 in one direction will cause the sections 27 and 28 to be extended while opposite rotation of the sleeve will retract these sections.

The lower end 32 of the lower lock bar section 27 is bifurcated, as shown, to receive the ear 24 of the bracket 22. A pivot pin 33 extends through matching holes in the furcations of the bifurcated end of the section 27 and the ear 24 and its ends are peened to preclude dislodgement thereof. Hence, the lock bar 26 may be swung inwardly and outwardly with respect to the keeper plate 18 whose holes 20 are adapted to selectively receive a correspondingly shaped protuberance or lug 34 formed on the upper lock bar section 28 adjacent its upper end. That portion of the section 28 from which the lug 34 extends is ground to a flat plane disposed at an acute angle with respect to the major axis of the lock bar, the lug 34 being perpendicular to said plane and spaced from the top of the section 28 to define an extension 35 beyond the lug 34 to elongate the bearing surface afforded by the said flat plane which latter is parallel with the face of the keeper plate 18.

From the foregoing it is evident that when the lower sash 11 is fully closed, the lug 34 of the lock bar 26 will engage the lowest of the vertical row of holes 20 in the keeper plate 18. If it is desired to raise the lower sash 11 slightly the lock bar 26 is moved away from the keeper plate 18 to disengage the lug 34 from a hole and is replaced in a higher hole 20. In this manner the desired ventilation is had without fear that an intruder will enter by raising the sash 11.

In order to prevent dislodgement of the lock bar 26 by an intruder inserting an instrument upwardly through the space 36 between the meeting rails 13 and 16, a safety latch is provided, consisting of a wire or rod 37 having a bifurcated end 38 which receives the ear 25 on the bracket 22 and is pivotally secured thereto by a pin 39, passing through matching holes in the bifurcated end 38 on the lower end of the rod 37 and the ear 25. The upper end of the rod 37 is formed into a hook 40 which, when the lower sash is raised, engages in a hole 20 in the keeper plate 18 immediately below the hole in which the lug 34 of the lock bar 26 is engaged.

To accommodate the hook 40 of the safety latch, either a channel 40a is cut in the face of the vertical sash frame member 12 in register with the holes 20 in the keeper plate before mounting the plate or recesses may be drilled in the frame member after the plate is mounted by inserting a suitable drill through the holes 20.

When the sash 11 is locked in the desired adjusted position the adjusting or extension sleeve 30 is rotated to separate the sections 27 and 28 of the lock bar 26, bringing the same under tension and setting the hook 40 firmly in its hole in the keeper plate 18. It therefore becomes virtually impossible to dislodge the safety latch which intercepts an instrument sought to be brought into engagement with the lock bar 26.

In Figure 3 is shown a lock bar per se which is identical to the lock bar just described except for its mounting. In this modification, the lock bar consists of the axially aligned sections 41 and 42 whose confronting ends are

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reversely threaded and are received in opposite ends of the adjusting sleeve 43, whose rotation extends and retracts the sections 41 and 42. The upper section 42 carries the lug 44 for selective engagement with the holes in the keeper plate while the lower section 41 has a bifurcated end 45 which receives an ear 46 formed with annular flanges 47 and 48 disposed on the top and bottom sides of a mounting plate 49. The plate is secured to the meeting rail 50 of the lower window sash by screws 51. This construction permits the lock bar to lie in operatively on and parallel with the meeting rail by virtue of its swivel connection with its mounting. This is also true of the safety latch, not shown, of the modified lock bar which is swivel mounted in the same manner on the same mounting plate 49 but separately from the lock bar.

Manifestly, the construction as shown and described is capable of some modification and such modification as may be construed to fall within the scope and meaning of the appended claims is also considered to be within the spirit and intent of the invention.

What is claimed is:

1. A sash lock for a window having upper and lower sliding sashes provided with meeting rails, said sash lock comprising an elongate keeper plate affixable to a vertical frame member of the upper sash of said window and having a plurality of longitudinally aligned holes therein, a bracket mountable on the meeting rail of the lower sash in alignment with said holes, a longitudinally extensible lock bar pivoted to said bracket whose upper end is engageable in a selected one of said holes to hold said lower sash in a predetermined raised position, and means also pivoted to said bracket inwardly of said lock bar for engaging the next lowest hole in said keeper plate below that engaged by the upper end of said lock bar to prevent dislodgement of the latter from its selected hole.

2. A sash lock for a window having sliding sash frames, comprising a lock bar pivotally attachable to the top of the lower sash frame and inclinable toward a vertical member of the upper sash frame, a keeper plate affixable longitudinally to said vertical member having a longitudinal row of holes therein, means on the upper end of

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said lock bar for engagement with a selected one of said holes when the lower sash is raised and effective to prevent vertical movement of said sash from its adjusted position, a safety latch pivotally attachable to said lower sash adjacent to said lock bar and engageable with a hole in said keeper plate below the hole engaged by said lock bar and means for elongating said lock bar to bring the same under tension in locked position thereof.

3. The structure of claim 2 wherein said lock bar is composed of two axially aligned sections having reversely threaded confronting ends and an adjusting sleeve having correspondingly threaded ends for receiving the confronting ends of said sections for extension and retraction thereof.

4. The structure of claim 2 wherein said safety latch is formed of a rod pivoted at one end and having a hook on its opposite end and disposed in inclined parallelism with said lock bar when said bar and latch are engaged with said keeper plate.

5. A sash lock for a window having upper and lower sash frames, comprising a keeper plate affixable to a vertical member of said upper sash frame having a group of longitudinally aligned holes therein, a longitudinally extensible lock bar pivotally attachable to the top of said lower sash frame and inclined toward said keeper plate, means carried by the upper end of said lock bar for engaging a hole of said group according to the adjusted height of said lower sash frame to hold the latter against movement in either direction, safety means pivotally attachable to said lower sash adjacent to said lock bar having a hooked upper end engageable in a hole of said group below said lock bar and means for elongating said lock bar in locked position thereof to impose compression on said lock bar and tension on said safety means.

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