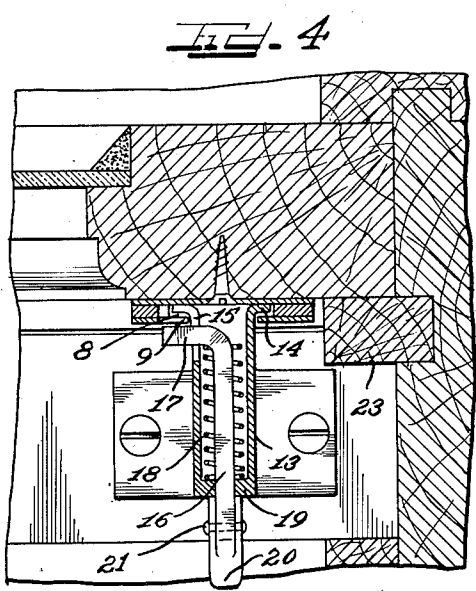
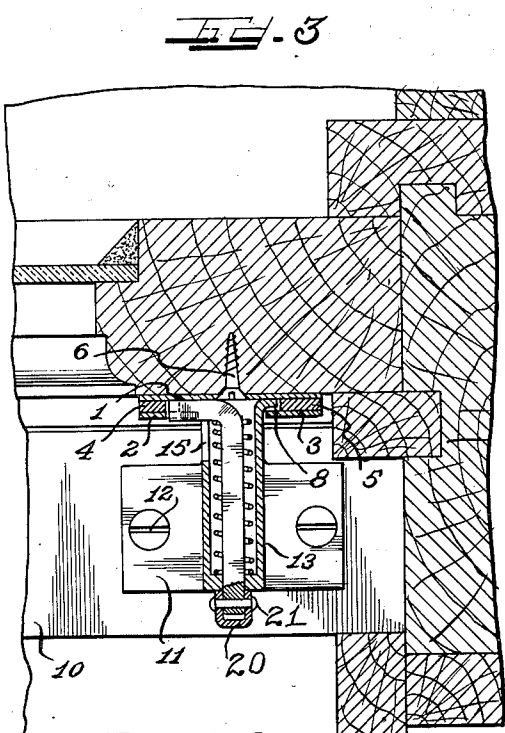
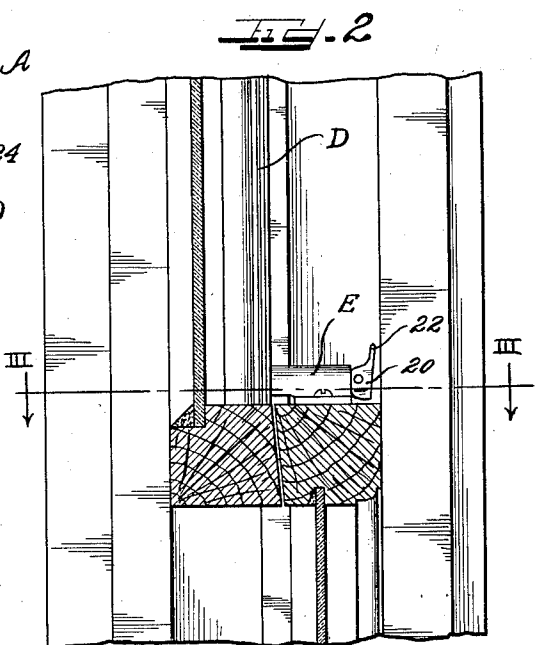
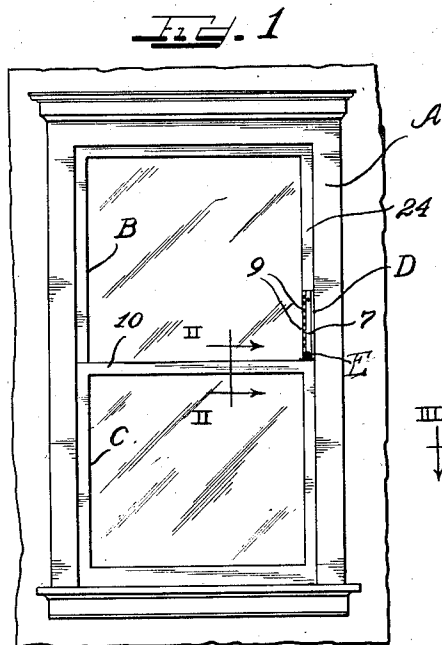


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WINDOW LOCKING DEVICE
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WINDOW LOCKING DEVICE

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7 Claims. (Cl. 292—169)

The present invention relates to a sash locking device, and more particularly to a sash lock device whereby the two sashes may be locked together in such fashion as to permit one to be opened, a fixed distance, without enabling further opening of the sash by anyone seeking unlawful entrance to the premises.

An object of the present invention is to provide a sash lock device, or adjuster, for the purpose of fastening and securely locking together window sashes in either fully closed, or partially opened position, to permit ventilation without enabling further opening of the sashes for unlawful entry.

A further object of the present invention relates to a sash lock device, which may be cheaply and simply produced, which may be easily applied to window sashes and by which the sashes may be locked in any desired relative relation.

A still further object of the present invention is to provide a sash lock device whereby the sashes of a window may be readily moved one with respect to the other, or whereby the sashes may be locked together preventing relative movement or where the sashes may be so locked together as to provide an opening in the window and whereby in such event further opening of the window is prevented.

Generally speaking, the device of the present invention includes keeper means adapted to be applied to a stile of an upper sash of a window, which keeper means provide an undercut slot, with notches along one margin of the slot; and a locking device applied to the top rail of a lower sash, which locking device includes a flanged barrel, with the flange adapted to ride in the undercut of the keeper, and a piston bolt movable within the barrel having a head projecting laterally from the barrel and adapted to enter a notch in the keeper for locking the sashes together in any desired relative relationship.

The above, other and further objects of the present invention will be apparent from the following description and accompanying drawing.

The accompanying drawing illustrates one embodiment of the present invention and the views thereof are as follows:

Figure 1 is an elevational view of a window having applied to the sashes thereof the sash lock of the present invention, showing the sashes in closed position, and viewing the window from the inside.

Figure 2 is an enlarged vertical sectional view taken along the line indicated by II—II of Fig. 1.

Figure 3 is an enlarged horizontal sectional view taken substantially in the plane indicated by

line III—III of Fig. 2, and showing the piston bolt in locking engagement with one of the notches of the keeper.

Figure 4 is a view similar to Fig. 3, showing the piston bolt retracted to enable relative movement of the sashes of the window.

The drawing will now be explained.

A window casing A of conventional form is provided with an upper sash B and lower sash C, adapted to be relatively moved as is common practice.

Applied to one of the stiles of the upper sash B, the right hand one as shown on the drawing, is a keeper device, indicated generally at D and herein illustrated as comprising a back plate 1 and side plates 2 and 3 arranged in spaced relation to the back plate 1, by fillers 4 and 5, respectively. The keeper is applied to the stile by screws or other suitable fastening means, such as shown at 6. If desired, the back plate may be omitted and the fillers 4 and 5 applied directly against the face of the stile of the sash.

The plates 2 and 3 provide a slot 7 extending the length of the keeper D and open at the top and bottom, and form an undercut, indicated at 8. One of the margins defining the slot 7 is provided with a plurality of notches 9 which open into the slot 7 and which preferably have their upper and lower margins perpendicular to the slot. Otherwise the notches are rectangular in elevation.

A locking device, indicated generally at E, is adapted to be applied to the upper rail 10 of the lower sash C in position to engage the keeper D.

The locking device E is illustrated as including a base plate 11, having apertures in it to receive fastening means, such as screws 12, and includes a barrel 13, the inner end of which is outwardly flanged at 14 to engage the undercut 8 of the keeper, whenever the barrel engages any portion of the keeper. The barrel 13 is, at its flanged end, provided with a notch 15 in the flange 14 and which notch extends away from the flange toward the opposite end of the barrel, as may be observed in Figs. 3 and 4.

Movable within the barrel 13 is a piston bolt 16 having its inner end bent to provide a laterally extending head 17, for engaging any of the notches 9 in the keeper. The head 17 projects laterally through the notch 15 in the barrel and is of such length as to enter any of the notches 9 whenever it is desired to lock the sashes together in any manner of adjustment.

For urging the piston bolt 16 into locking position, a coiled spring 18 surrounds the bolt with-

in the barrel 13 and engages against the head of the bolt at one end and against the other end of the barrel as at 19. The spring 18 is tensioned, as before stated, to urge the head 17 into locking engagement with any of the notches 9 of the keeper when so permitted. For retracting the piston bolt 16 and holding it in retracted position, a cam member 20 is pivoted at 21 to the extremity of the piston bolt 16 which projects through the end 13 of the barrel. This member 20 is a quarter cam member and has the projection 22 for ready engagement by a finger of an operator to actuate it.

The accompanying drawing illustrates sashes B and C as being spaced, slightly, by a stop or parting strip 23. This however is a matter of choice and the space between the rails of the sash may be spaced as desired.

In the event that the device of the present invention is applied to old sashes, where the space between the rails of the upper and lower sash is at a minimum, then the stile 24 of the upper sash B may be routed so that the keeper D might be inset to permit ready relative movement of the sashes.

For normal operation of the sashes B and C, the piston bolt 21 is retracted, as shown in Fig. 4, which is accomplished by moving the cam 20 to the position illustrated in Fig. 4, from the position illustrated in Figs. 2 and 3. The position of the cam 20, in Figs. 2 and 3 shows the position occupied when the head 17 of the piston bolt is in locking engagement with a notch 9 of the keeper.

With the piston bolt 16 retracted, as shown in Fig. 4, the sashes B and C may be relatively freely moved as desired.

When it is desired to lock the sashes B and C, against relative movement, the cam 20 is moved from the position of Fig. 4 to the position of Figs. 2 and 3, whereupon the spring 18 becomes effective to project the bolt with its head 17 into engagement with one of the notches 9 of the keeper. If it is desired to lock the sashes B and C together, in partially opened position, either of the sashes is moved vertically to the desired position and the cam 20 manipulated so that the piston bolt 16 is projected into locking engagement with a suitable notch 9 of the keeper, thus securely locking together the sashes against relative movement. In this manner the sashes may be locked together, in partially opened position, the upper sash in closed position and the lower sash raised from the sill of a frame, or the lower sash in closed position and the upper sash lowered from the lintle of the frame.

It will be observed that the device of the present invention is effective in use, simply constructed, and is easily applied to any window sashes for locking purposes.

While but one of the stiles of the upper sash B is shown as supplied with a keeper of the present invention, it is to be understood of course that the other stile might be provided with a duplicate, and that an additional locking device E applied to the upper rail 10 of the lower sash to cooperate with such keeper, thus providing two locks for the sash.

Referring to Figs. 3 and 4 of the drawing, it will be observed that the keeper is shown as made of separate pieces, that is the back plate 1, the fillers 4 and 5, and the sash plates 2 and 3. It is to be understood, of course, that the fillers and plates 2 and 3 might be made as integral pieces

with the undercut 8 formed by suitable machine operation.

The invention has been described herein more or less precisely as to details, yet it is to be understood that the invention is not to be limited thereby, as changes may be made in the arrangement and proportion of parts, and equivalents may be substituted, without departing from the spirit and scope of the invention.

The invention is claimed as follows:

1. In a sash lock, the combination of a locking member comprising a base plate, a barrel thereon, a spring tensioned piston bolt movable in said barrel, a keeper comprising a plate having a plurality of notches therein to receive the piston bolt of said locking member, said bolt having a notch engaging end projecting laterally from the barrel, said barrel having a notch for said bolt end adapted to align with a keeper notch when it is desired to lock the sashes together, and a cam lever pivoted to the shank of said bolt for manipulating the bolt into and out of locking engagement with a keeper notch.

2. In a sash lock, in combination, a locking member comprising a barrel having a lateral slot at one end, a piston bolt movable in said barrel, said bolt having a notch engaging head projecting laterally of the barrel through said slot, a keeper plate having a slot with notches along one margin of the slot for engagement by said bolt head for locking purposes, means for holding said head in a notch, and means for retracting said bolt to disengage the head from a notch.

3. In a sash lock of the type described, in combination, a locking member comprising a barrel having a lateral slot at one end, a piston bolt movable in said barrel, a coiled spring acting to project said bolt, a cam piece pivoted to said bolt to retract the same, said bolt having a notch engaging head projecting laterally from said barrel through said slot, and a keeper plate having a slot with notches along one margin of the slot for engagement by said bolt head for locking purposes.

4. A sash lock comprising means providing an undercut slotted keeper on a stile of an upper sash, said means having a plurality of notches along one margin of the slot, a locking member adapted to be secured to the top rail of a lower sash and having a barrel with a flanged head for sliding in said undercut, said barrel having a lateral notch in said flange and extending rearwardly therefrom, a piston bolt slidable within said barrel and having an angularly disposed head extending through said barrel notch laterally of the barrel and adapted to enter a keeper notch, a spring within said barrel tensioned to project said bolt, and cam means pivoted to said bolt to retract it.

5. In a window sash locking device, a notched plate adapted for attachment to a stile of an upper sash, a locking member adapted for attachment to the top rail of a lower sash, said member including a slotted barrel and a bolt reciprocable in the barrel, said bolt having a bent end adapted to enter a notch in said plate, said bent end projecting through and riding in said slot to prevent rotative movement of said bolt as it is axially moved, and spring means for urging said bolt into notch engaging position and manually operable means for withdrawing the bolt from a notch.

6. In a sash lock, a rack for attachment to a sash, a barrel for attachment to an adjacent sash,

a bolt reciprocable in said barrel and having a laterally turned head to engage said rack, and said barrel having a slot therein in which the head of said bolt rides during its reciprocal movement.

5 7. In a sash lock, means providing an undercut slotted keeper on one sash, said means having a plurality of notches along a margin of the

slot, a locking member adapted to be secured to a second sash and having a barrel with a flanged head for sliding in said undercut, and a bolt movable within said barrel and having an angularly disposed head extending through said barrel and adapted to enter one of said notches. 5

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