July 31, 1945. T. HANNON 2,380,694

WINDOW LOCKING DEVICE

Filed March 27, 1944

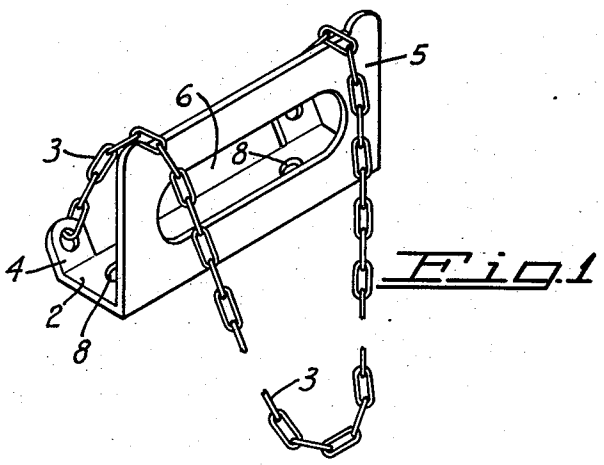


Fig. 1

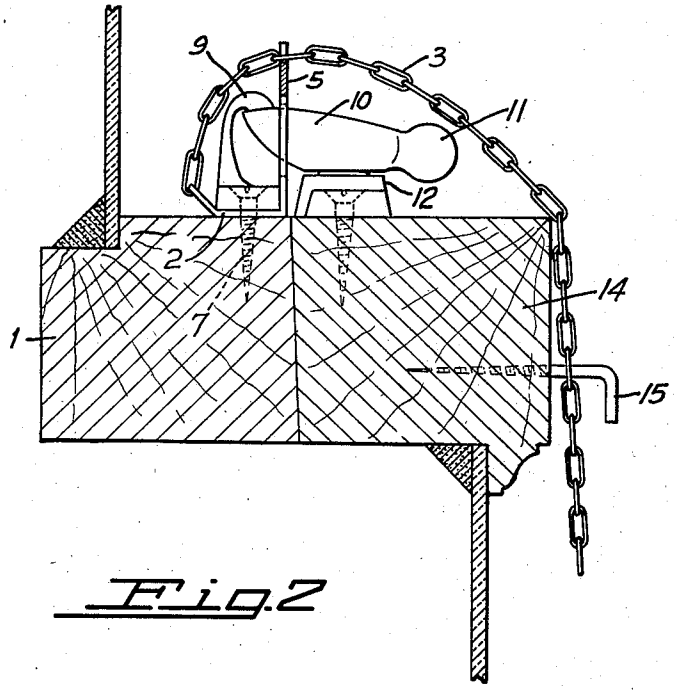


Fig. 2

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Patented July 31, 1945 2,380,694

UNITED STATES PATENT OFFICE

2,380,694

WINDOW LOCKING DEVICE

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Application March 27, 1944, Serial No. 528,273

5 Claims. (Cl. 292—264)

My invention relates to window locks, and particularly to a locking device which will limit the distance a window sash may be opened, and thereby serve to lock the window in a partially opened position.

It is among the objects of my invention to provide a window locking device which may be applied to window sashes to provide means whereby the window may be locked in either a closed or a partially open position.

Another object is to provide a locking device having a chain arranged to limit the distance a window sash may be opened, and having means for preventing the chain from interfering with the closing of the window.

Another object is to provide a chain mounting means which may be readily mounted in connection with the ordinary form of window lock, without interfering with the operation of such lock in the ordinary manner.

My invention possesses other objects and features of value, some of which with the foregoing will be set forth in the following description of the invention. It is to be understood that I do not limit myself to the showing made by the said description and the drawing as I may adopt variant forms of the invention within the scope of the appended claims.

In the drawing:

Figure 1 is an isometric projection of the chain and chain mounting fitting of my invention, part of the chain being broken away.

Figure 2 is a transverse section through the adjoining rails of a pair of window sashes, illustrating the locking device of my invention applied thereto.

In terms of broad inclusion, the window locking device of my invention comprises a chain having its ends secured to a movable sash and its length double to form a loop for engaging a fastening upon a companion sash, or other adjacent object, to limit the distance either sash can be moved from its closed position. Preferably the chain is secured to the sash by means of a plate, secured under one of the fittings of an ordinary window lock, and having spaced lugs to which the ends of the chain are secured. A flange extends upwardly between the lock members for supporting the loop portion of the chain, the flange having an opening through which the cam portion of the ordinary lock may be operated to lock the sashes in closed relation. Preferably means are provided for preventing the chain from slipping off the ends of the flange.

In terms of greater detail, the locking device of my invention comprises a plate 2 arranged to be secured to a movable sash 1. A chain 3 has its ends secured to the plate 2 by means of ears or lugs 4 adjacent the ends thereof. A flange 5 extends from the plate 2, at substantially right angles thereto, along the forward edge of the plate opposite the lugs 4. An opening 6 is formed in the flange 5.

The plate 2 has openings 8 therein spaced to receive the screws 7 by which the hook member 9 of an ordinary window lock is secured to the sash 1. The plate is preferably applied under the member 9, where it is held by the screws 7 without requiring separate securing means.

The flange 5 extends upwardly between the hook member 9 and the cam member 10 of the window lock. The opening 6 of the flange 5 is shaped and positioned to permit the cam member 10 to extend through the flange, and to engage and interlock with the hook 9 in the ordinary manner. The cam member 10 is provided with the usual handle 11 by which it is operated, and is pivoted upon the usual base 12, screwed or otherwise secured to a sash 14 adjoining and cooperating with the sash 1.

The chain 3 forms a loop which extends over the flange 5 into engagement with a hook or other suitable fastener 15 secured to the sash 14. The loop formed by the chain 3 normally hangs downwardly past the sash rail 14 and hook 15, while the cam 10 extends through the opening 6 to interlock with the hook 9, as shown in Figure 2 of the drawing, for locking the sashes in closed relation.

When it is desired to lock the windows in partially opened relation, the cam member 10 is moved to disengage the hook 9 and to clear the flange 5. As either or both sashes are moved in the opening direction, the end of the chain loop is engaged by the hook 15, and limits the distance the sashes may be moved relative to each other. The chain normally permits an opening of only a very few inches. If desired the chain may be hooked onto the hook 15, through one of its links, to provide a shorter range of movement; or the chain may be given one or more turns around the hook 15 to shorten its effective length.

The flange 5 provides a guard which holds the chain clear of the lock members 9 and 10, so as to prevent interference with the normal operation thereof. Also, the flange 5 prevents slack in the chain 3 from dropping into the space between the sashes in such a way as to obstruct their return to closed positions. Ears may be provided on the upper corners of the flange 5

to prevent the chain from slipping off either end of the flange.

The device may be applied in new installations by merely placing the plate 2 under the hook member 9 as it is being installed upon the sash 1. In old installations, the device may be installed by removing the screws which secure the hook member 9 to the sash, next inserting the plate 2 under the hook member, and then replacing the screws 7 to secure both the hook member and the plate to the sash 1. In general, the thickness of the plate 5 does not affect the securing and operation of the ordinary lock members 9 and 10, except perhaps to require the cam member 10 to be turned slightly farther before effecting locking engagement with the hook 9. If desired, the plate may be countersunk into the sash 1. Also, the opening 6 may be shaped to provide locking engagement with the cam member 10, so that the hook member 9 may be dispensed with entirely.

The chain 3 permits the sashes 1 and 14 to be moved freely to open the window within the limit imposed by the chain. The adjoining rails of the sashes prevent tampering with or displacement of the chain from outside the window; and the chain affords an effective means for locking the sashes against movement in the opening direction beyond the limit fixed by the length of the chain. When it is desired to open the window beyond the limits of the chain 3, the chain loop is held out of engagement with the hook 15 while the sashes are moved to the desired position. As the sashes are returned to closed position, the chain loop is returned to normal position passing around the hook 15.

I claim:

1. A locking device for window sashes comprising a chain secured at one end to one of a pair of relatively movable sashes, means upon the other sash engaging the other end of the chain at a point for limiting movement of either sash, and a guard mounted upon one of the sashes and projecting upwardly therefrom along the meeting edges of the sashes for engaging and supporting the chain at a point between said ends.

2. A locking device for window sashes comprising a plate arranged to be secured to a movable window sash, a flange upon the plate projecting upwardly therefrom along its forward edge, chain engaging lugs upon the rearward edge of the plate, a chain having its ends secured to the lugs and extending in loop form over the flange, and a hook secured adjacent the sash and engaged by the loop for limiting movement of the sash.

3. A locking device for window sashes of the type having relatively movable upper and lower sashes provided with adjoining rails, comprising a plate secured to the lower rail of an upper sash, a flange upon the forward edge of the plate, chain engaging means upon the rearward portion of the plate, a chain having its ends secured to the chain engaging means and doubled to form a loop extending over the flange, and a hook upon the adjoining upper rail of a companion lower sash for engaging the loop to limit relative movement of the sashes.

4. A window locking device for limiting opening movement of a pair of relatively movable window sashes having adjoining rails provided with interengageable hook and cam members for locking the sashes in closed relation, said device comprising a plate mountable upon one sash under one of the locking members, a flange upon the plate positioned to extend upwardly between the lock members and having an opening through which the cam member may be moved to lock the window, chain engaging means upon the plate in back of the flange, a chain having its ends secured to the chain engaging means and doubled to form a loop extending over the flange, and means mountable upon the other sash for engaging the loop to limit relative movement of the sashes.

5. A window locking device for limiting opening movement of a pair of relatively movable window sashes having adjoining rails provided with interengageable hook and cam members for locking the sashes in closed relation, said device comprising a plate mountable upon one sash under one of the locking members, a flange upon the plate positioned to extend upwardly between the lock members and having an opening through which the cam member may be moved to lock the window, chain engaging means upon the plate in back of the flange, a chain having its ends secured to the chain engaging means and doubled to form a loop extending over the flange, means mountable upon the other sash for engaging the loop to limit relative movement of the sashes, and ears upon the ends of the flange for retaining the loop thereon.

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