April 1, 1941. J. WING 2,236,722

COMBINED SASH LOCK AND LIFT

Filed Oct. 22, 1940

Fig. 3

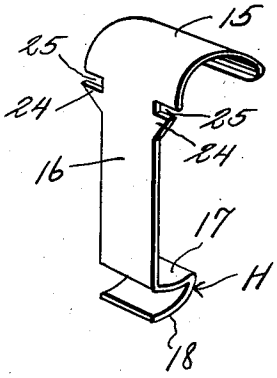


Fig. 2

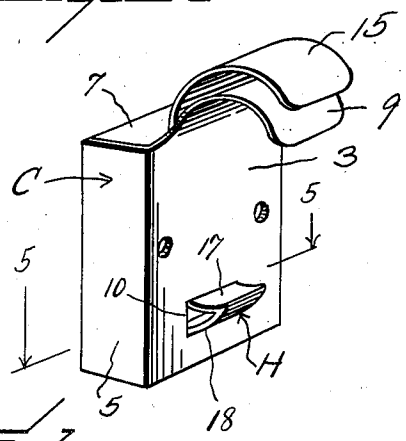


Fig. 4

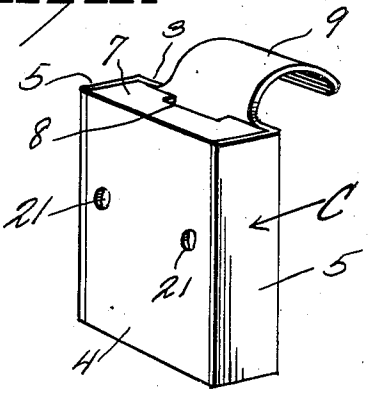


Fig. 1

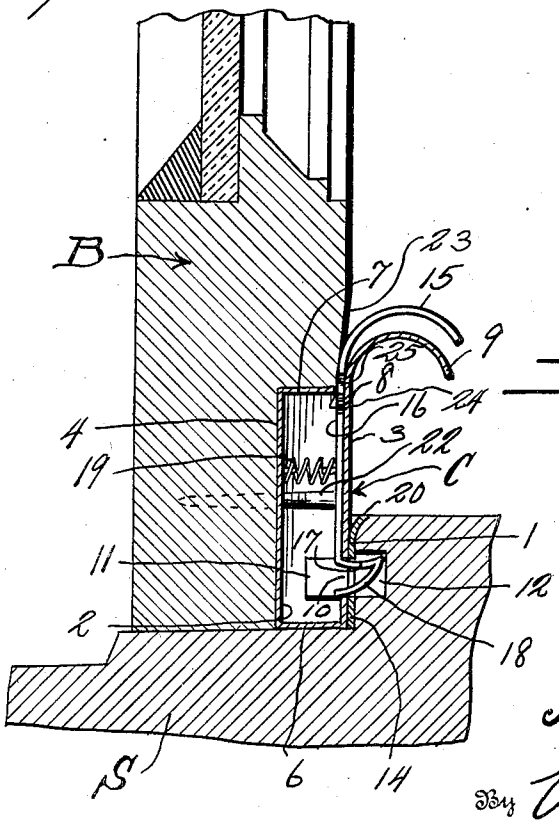
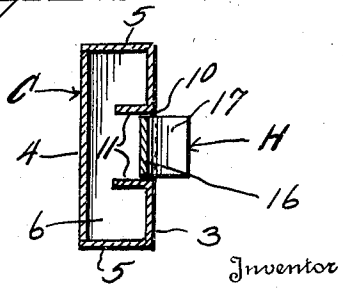


Fig. 5



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2,236,722

COMBINED SASH LOCK AND LIFT

Johnnie Wing, Sulphur, La., assignor of twenty-five per cent to Samuel J. Diglia, five per cent to Joseph P. Diglia, and five per cent to James E. Diglia, all of Sulphur, La.

Application October 22, 1940, Serial No. 362,267

6 Claims. (Cl. 292—114)

This invention relates to a combined sash lock and lift, and it is an object of the invention to provide a device of this kind embodying means for effectively locking a window sash in closed position together with means for raising the sash, both of such means being associated in a manner whereby the locking means is made ineffective upon grasping the second means to lift or raise the window.

Another object of the invention is to provide a device of this kind provided with means for locking the window sash and for raising the sash after the lock has been released.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved combined sash lock and lift whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawing, wherein—

Figure 1 is a vertical sectional view with parts in elevation illustrating a combined sash lock and lift constructed in accordance with an embodiment of my invention and in applied position;

Figure 2 is a view in perspective of the improved device herein embodied unapplied;

Figure 3 is a view in perspective of the hook member or catch unapplied;

Figure 4 is a view in perspective of the casing forming part of the device, the hook or catch being omitted;

Figure 5 is a sectional view taken substantially on the line 5—5 of Figure 2 looking in the direction of the arrows.

As disclosed in the accompanying drawing, B denotes the bottom rail of a window sash which, when closed, coacts with the usual window sill S provided therealong with an outwardly facing shoulder 1. The inner face of the rail B at a desired point therealong is provided with a cavity 2 in which is snugly fitted a casing C. This casing C, as herein disclosed, is formed from a single sheet of material formed to provide a front wall 3, a back wall 4, the side walls 5, the bottom wall 6, and the top wall 7. The top wall 7 immediately adjacent to the front wall 3 is provided in its central part with the shallow elongated recess or narrow slot 8. The top marginal portion of the front wall 3 has extending therethrough an upwardly and outwardly curved finger piece or lift member 9.

The front wall 3 of the casing C in its lower part is provided with an opening 10 of desired size and which has its side edges defined by the inwardly disposed side plates 11 substantially at right angles to the front wall 3. When the window sash is in its closed position as illustrated in Figure 1, this opening 10 registers with a recess or mortise 12 within the shoulder 1 and which recess or mortise 12 has disposed thereover a conventional keeper plate 14. Overlying the piece or member 9 and at all times in close proximity thereto is an upwardly and outwardly curved lug plate 15. This plate 15 is carried by the upper end of an elongated flat shank 16 which is slidably disposed through the recess or slot 8 of the top plate 7 of the casing C. The depth or width of the recess or slot 8 is such as to allow the shank 16 to have swinging movement and also to permit the shank 16 to have endwise movement through said recess or slot 8.

The lower end portion of the shank 16 or the extremity thereof remote from the lug plate 15 is formed to provide an outstanding hook or catch H of desired length and which moves outwardly through the opening 10 of the casing C to engage within the recess or mortise 12 when the window sash is closed to hold said sash against opening movement as is clearly illustrated in Figure 1 of the drawing. To facilitate the holding action of the hook or catch H, the top surface 17 thereof is depressed on a desired curvature with the opposite ends of said surface occupying a plane substantially at right angles to the shank 16.

The inner portion of the hook or catch H is of a height substantially equal to the height of the opening 10 and the under surface 18 of the hook member or catch H is disposed on a downward and inward incline whereby is provided a cam or bevel for contact with the bottom edge of the wall 3 defining the opening 10. Interposed between the shank 16 and the rear wall 4 of the casing C is an expansible member 19 of a tension to constantly urge the shank 16 into contact with the inner face of the front wall 3 and thereby normally maintain the hook member H extended out through the opening 10.

As the sash is lowered the cam or beveled face 18 of the hook member H will contact the inwardly and upwardly beveled portion 20 at the top of the keeper plate 14 whereby the hook

member H will be forced within the casing C to allow the sash to assume fully closed position whereupon the member or spring 19 will force the hook member H out through the opening 10 into the recess or mortise 12. As this hook member H enters the recess or mortise 12 the under curved or beveled surface 18 will contact the lower edge of the wall 3 defining the opening 10 to move the shank 16 outwardly to assure the lug plate 15 being spaced above the finger piece or lift member 9.

When it is desired to lift the window the finger piece or lift member 9 and the lug plate 15 thereabove are grasped between the digits of a hand and the pressure of such digits upon the finger piece or lift member 9 and the lug plate 15 will cause the shank 16 to move downwardly and swing inwardly.

The inward swinging movement of the shank 16 will be facilitated by the contact of the surface 18 of the hook member H with the bottom edge of the opening 10 as the shank 16 is in downward movement. This downward and swinging movement of the shank 16 is sufficient to fully retract the hook member H from within the recess or mortise 12 whereby the sash will be free to move upwardly into raised position by pull imposed upon the finger piece or lift member 9.

The lugs 11 serve to maintain the hook member H in proper position during the inward or outward movement of the hook member H with respect to the opening 10.

The casing C may be held to the bottom rail B of the window sash in any manner preferred. In the present embodiment of my invention the side portions of the front wall 3 and the rear wall 4 of the casing are provided with the openings 21 through which anchoring screws or the like may be inserted, as indicated at 22 in Figure 1.

The outer surface of the front wall 3 of the applied casing C is substantially flush with the inner surface of the bottom rail B of the window sash and to facilitate the desired functioning of the hook member H the inner surface of the rail B immediately above the recess or slot 8 is slightly beveled inwardly, as indicated at 23.

The shank 16 at its upper portion is provided with the laterally and oppositely directed wings 24 which are adapted to contact from below with the upper or top plate 7 of the casing C whereby the extent of upward movement of the shank 16 is limited. The wings 24 are spaced a material distance from the inner end of the lug plate 15 to provide notches 25 of a width considerably in excess of the thickness of the upper or top plate 7 so that the shank 16 is capable of having sufficient endwise movement to assure the efficient operation of the hook or catch member H.

From the foregoing description it is thought to be obvious that a combined sash lock and lift constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:

1. A combined sash lock and lift comprising an enclosed casing having an opening in its front wall and a slot in its top wall, a finger piece carried by the upper extremity of the front wall of the casing and extending in advance thereof, a lug plate overlying the finger piece, a shank depending from the lug plate and extending within the casing through the slot in the top wall of the casing, means for connecting the shank to the top wall of the casing, said means being so constructed and arranged to allow the shank to have limited endwise movement and swinging movement, a forwardly disposed catch carried by the lower extremity of the shank for projection through the opening in the front wall of the casing, and yieldable means for constantly urging the shank toward the front wall of the casing with the catch of the shank projected out through the opening in the front wall of the casing.

2. A combined sash lock and lift comprising an enclosed casing having an opening in its front wall and a slot in its top wall, a finger piece carried by the upper extremity of the front wall of the casing and extending in advance thereof, a lug plate overlying the finger piece, a shank depending from the lug plate and extending within the casing through the slot in the top wall of the casing, means for connecting the shank to the top wall of the casing, said means being so constructed and arranged to allow the shank to have limited endwise movement and swinging movement, a forwardly disposed catch carried by the lower extremity of the shank for projection through the opening in the front wall of the casing, and yieldable means for constantly urging the shank toward the front wall of the casing with the catch of the shank projected out through the opening in the front wall of the casing, the catch having an inwardly and downwardly disposed bottom surface for contact with the lower edge of the opening for moving the shank upwardly and maintaining the lug plate spaced above the finger piece.

3. A combined sash lock and lift comprising an enclosed casing having an opening in its front wall and a slot in its top wall a finger piece carried by the upper extremity of the front wall of the casing and extending in advance thereof, a lug plate overlying the finger piece, a shank depending from the lug plate and extending within the casing through the slot in the top wall of the casing, means for connecting the shank to the top wall of the casing, said means being so constructed and arranged to allow the shank to have limited endwise movement and swinging movement, a forwardly disposed catch carried by the lower extremity of the shank for projection through the opening in the front wall of the casing, yieldable means for constantly urging the shank toward the front wall of the casing with the catch of the shank projected out through the opening in the front wall of the casing, and inwardly disposed guide plates defining the side edges of the opening in the front wall of the casing.

4. A combined sash lock and lift comprising an enclosed casing having an opening in its front wall and a slot in its top wall a finger piece carried by the upper extremity of the front wall of the casing and extending in advance thereof, a lug plate overlying the finger piece, a shank depending from the lug plate and extending within the casing through the slot in the top wall of the casing, means for connecting the shank to the top wall of the casing, said means being so constructed and arranged to allow the shank to have limited endwise movement and swinging movement,

a forwardly disposed catch carried by the lower extremity of the shank for projection through the opening in the front wall of the casing, and yieldable means for constantly urging the shank toward the front wall of the casing with the catch of the shank projected out through the opening in the front wall of the casing, the top surface of the catch being depressed with the extremities of said surface in a plane substantially at right angles to the shank.

5. A combined sash lock and lift comprising an enclosed casing having an opening in its front wall and a slot in its top wall, a finger piece carried by the upper extremity of the front wall of the casing and extending in advance thereof, a lug plate overlying the finger piece, a shank depending from the lug plate and extending within the casing through the slot in the top wall of the casing, means for connecting the shank to the top wall of the casing, said means being so constructed and arranged to allow the shank to have limited endwise movement and swinging movement, means carried by the shank and coacting with the casing for limiting the extent of endwise movement of the shank, a forwardly disposed catch carried by the lower extremity of the shank for projection through the opening in the front wall of the casing, and yieldable means for constantly urging the shank toward the front wall of the casing with the catch of the shank projected out through the opening in the front wall of the casing.

6. A combined sash lock and lift comprising an enclosed casing having an opening in a front wall and a slot in its top wall, a finger piece carried by the upper extremity of the front wall of the casing and extending in advance thereof, a lug plate overlying the finger piece, a shank depending from the lug plate and extending within the casing through the slot in the top wall of the casing, the upper portion of the shank being provided with notches to receive the portions of the top wall of the casing at opposite ends of the slot, said notches being of a width in excess of the thickness of the portions of the top wall therein to allow the shank to have limited endwise movement and swinging movement, a forwardly disposed catch carried by the lower extremity of the shank for projection through the opening in the front wall of the casing, and means for constantly urging the shank toward the front wall of the casing with the catch of the shank projected out through the opening in said front wall.

JOHNNIE WING.