

Nov. 29, 1966

M. J. GOUGH ETAL
WINDOW SASH LOCKS

3,288,510

Filed Aug. 3, 1965

2 Sheets-Sheet 1

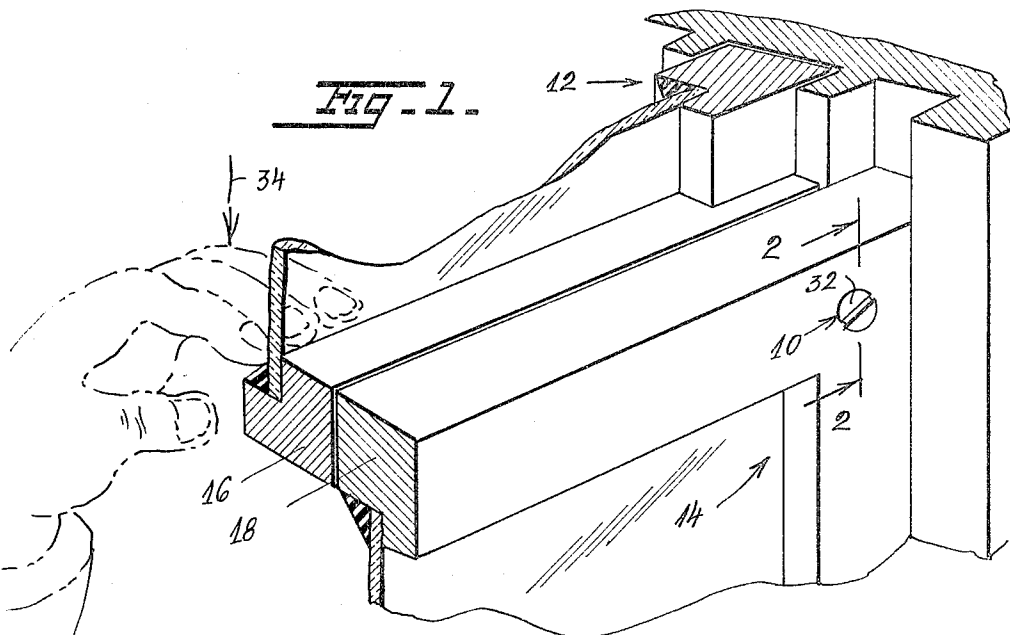
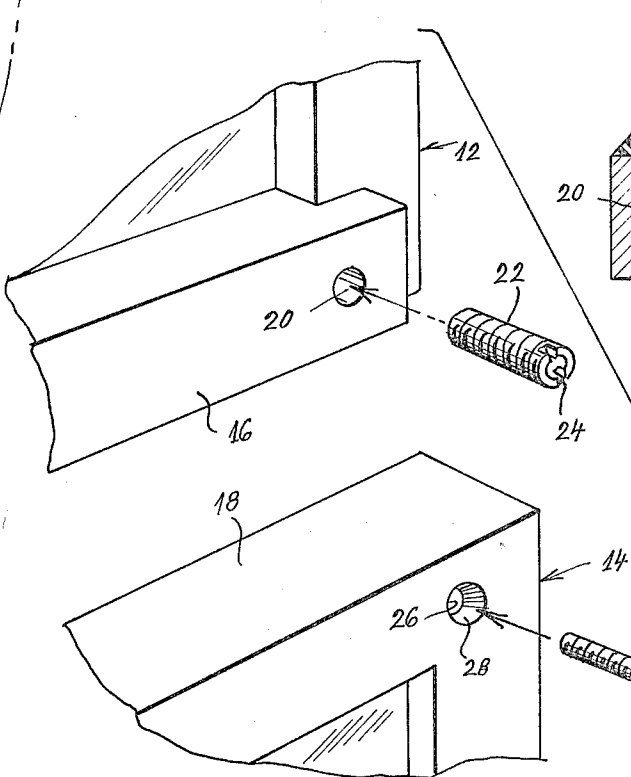
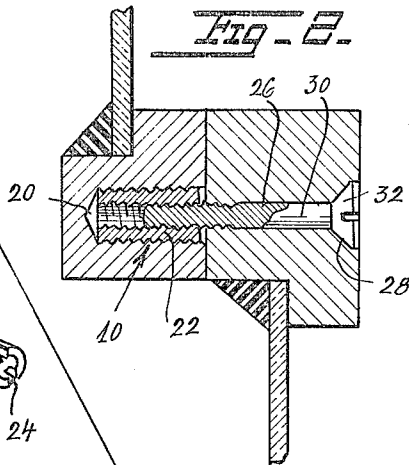
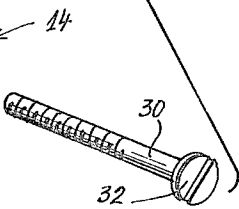


Fig. 3.



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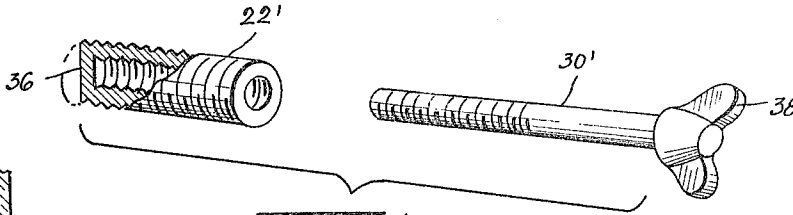
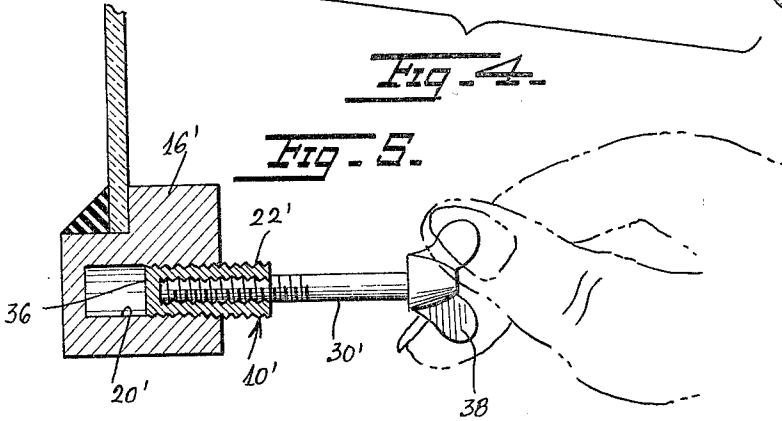
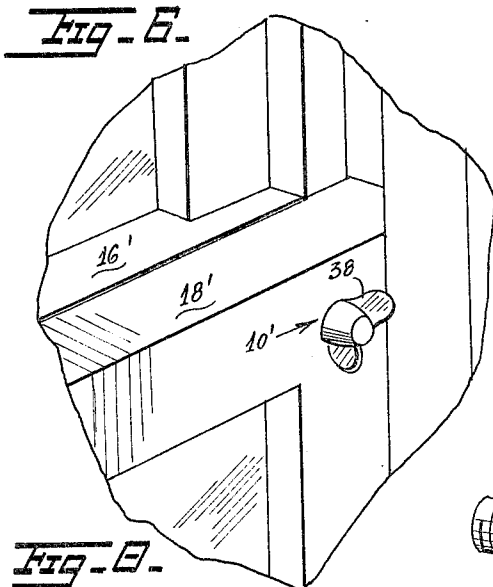
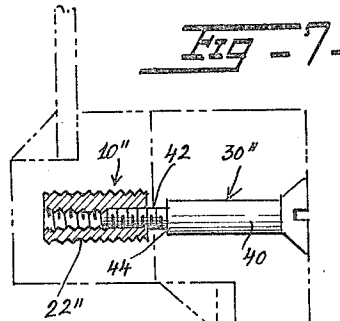
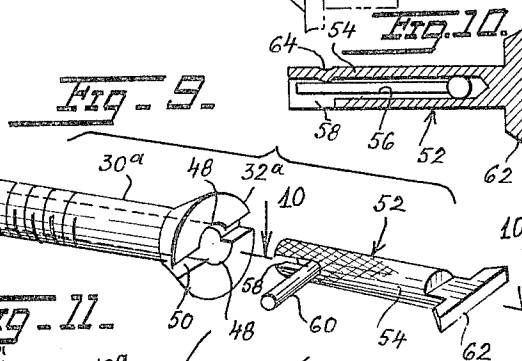
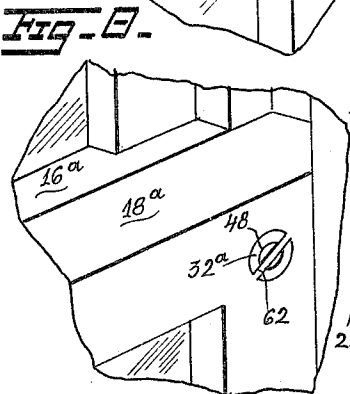
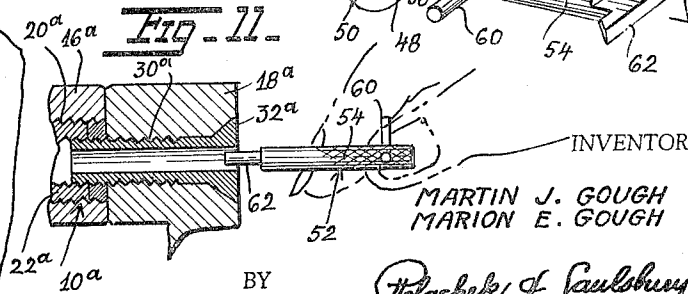
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3,288,510

WINDOW SASH LOCKS

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Filed Aug. 3, 1965, Ser. No. 476,917

1 Claim. (Cl. 292—251)

This invention relates specifically to new and useful improvements in window sash locks.

Heretofore, the sashes in a window have been locked by means of a rotatable member secured to one of the sashes which has been provided with a cam surface engageable with a latch or locking member on the other of the sashes. Such locking means is usually placed on the oppositely disposed members of the sash frames where it is conspicuous from the outside of the window. Such a device is therefore not burglarproof and is extremely objectionable for this reason.

A primary object of the present invention is to provide a novel lock that is adapted to be readily mounted on the frame members of window sashes or the like, which is burglarproof and cannot be manipulated or operated from the exterior of the window sashes.

Another object of the invention is to provide a locking device for sashes of a double hung window which is invisible from the exterior of the window and substantially invisible from the interior.

A further object of the invention is to provide a locking device for sashes of a double hung window which is normally operated with a tool and which is adapted to draw the frame members of the sashes together to provide an effective weatherproof joint between the same.

Yet another object of the invention is to provide a novel locking device for window sashes which, when operated, is automatically released from its locking engagement with these sashes so that the same may be moved relative to one another.

It is also proposed to provide a locking device for window sashes that is invisible from outside the window, one which quickly and easily draws the sashes together to provide a weather-tight joint therebetween and one which permits easier cleaning of the window inasmuch as the same is substantially entirely closed and is not in the way of the individual performing of this operation.

For further comprehension of the invention and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings and to the appended claim in which the various novel features of the invention are particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

FIGURE 1 is a perspective view of the meeting rails of a sliding sash window having a locking device embodying one form of the invention applied thereto.

FIG. 2 is an enlarged vertical sectional view taken on the plane of the line 2—2 of FIG. 1.

FIG. 3 is a spread perspective view showing the locking components in position preparatory to insertion into the sashes.

FIG. 4 is a spread perspective view of a modified form of locking device.

FIG. 5 is a vertical sectional view through a meeting rail showing the locking device of FIG. 4 being applied thereto.

FIG. 6 is a view similar to FIG. 1 showing the locking device of FIG. 4 applied thereto.

FIG. 7 is a part sectional and part elevational view of another modified form of locking device, the device being shown applied to meeting rails of window sashes in dash lines.

FIG. 8 is a view similar to FIG. 1 showing yet another modified form of locking device.

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FIG. 9 is a spread perspective view of some of the components of the locking device of FIG. 8.

FIG. 10 is a sectional view of one of the components of the locking device of FIG. 8.

FIG. 11 is a sectional view similar to FIG. 2 showing the tool preparatory to being inserted into the locking device of FIG. 8.

Referring now more in detail to the various views of the drawings, and more particularly to FIGS. 1 to 3, inclusive, a locking device 10 made in accordance with one form of the invention is shown in association with sashes 12 and 14 of a wooden window construction. The sashes have oppositely disposed frame members 16 and 18, respectively.

The frame member 16 of the upper sash 12 is formed with an elongated round recess 20 intersecting the inner surface of the frame member 16 at the bottom right hand corner as viewed in FIG. 1. A metal bushing or sleeve 22 with external and internal screw threads is threaded into the recess 20. The bushing or sleeve is formed with a slotted end 24 to receive a tool for driving the bushing in to the recess or for withdrawing the same.

The frame member 18 of the bottom sash is formed with an opening 26 extending therethrough at the top right hand corner thereof. The inner end of the opening is countersunk as indicated at 28. An elongated screw 30 extends through the opening 26 and is threaded into the bushing or sleeve 22. When the screw is driven home, its slotted head 32 seats in the countersunk portion 28 of the opening as seen in FIG. 1. The screw 30 coacting with the bushing or sleeve 22 locks the frames of the sashes to each other and draws the frames of the sashes to each other thereby providing a weatherproof joint. When the locking device is in locking position, only the head 32 is visible from the inside of the room and is not visible from outside the window. Only a screw driver is needed to lock and unlock the sashes.

It will be seen from FIG. 1, that the locking device 10 is out of sight and out of reach of the hand of an unauthorized person as shown by the arrow 34.

In FIGS. 4—6, a modified form of locking device 10' is shown comprising a bushing or sleeve 22' and a screw 30'. The bushing 22' differs from the bushing 22 of FIG. 2 in that one end of the body of the bushing is closed by a wall and the other end is solid and not slotted. The screw 30' instead of having a slotted flat head as shown in FIG. 1 has a wing nut 38 for turning the screw.

In use, the bushing or sleeve 22' is driven home in the recess 20' by means of the screw 30', the threaded end of the screw adapted to engage the closure wall 36 and force the bushing inwardly while it turns the same. After the bushing is driven home, the screw 30' is withdrawn and the frames 16' and 18' juxtaposed, with the opening in the frame 18' in line with the recess 20' in the frame 16', whereupon the screw 30' is inserted through the opening in the frame 18' and into the bushing or sleeve 22' thereby locking the frames and drawing the frames toward each other in weathertight position.

FIG. 7 illustrates a modified form of locking device 10'' which differs from the locking device 10 merely in the construction of the screw 30''. The screw 30'' has a smooth shank portion 40 and an axial extension 42 of reduced diameter and threaded, the shoulder 44 formed by the juncture of the shank and extension limiting the inward movement of the screw into the bushing or sleeve 22''.

In FIGS. 8 to 11, inclusive, a further modified form of locking device 10a is shown locking the sash frames 16a and 18a. The locking device 10a consists of a

bushing or sleeve 22a similar to sleeve 22 in recess 20a in frame 16a, sleeve 22a and a screw 30a. The sleeve 22a is similar to sleeve 22 and is positioned in the recess 20a in the frame 16a. The screw 30a is hollow and is formed with opposed semi-circular notches 48 in the slot 50 formed in its head 32a.

In use, when the screw 30a is driven home as shown in FIGS. 8 and 11, the frames 16a and 18a are locked to each other.

The invention contemplates a tool 52 for driving the screw 30a home. The tool has an elongated solid cylindrical body 54 formed with an axial bore 56 intersecting one end edge of the body and with an elongated slot 58 intersecting said end edge and bore. A pin 60 is hingedly mounted at the slotted end and is adapted to extend laterally of the shank and to seat in said slot. The other end of the body is shaped to form a screw driver edge 62 adapted to fit in the slot 50 of the screw 30a for turning said screw.

In use, when the locking device 10a is in operative position locking the frames 16a and 18a as shown in FIG. 8, the tool 52 is stored away in the hollow body of the screw 30a, the pin 60 having first been swung into its seat in the slot 58 in the tool 52, and the tool slid through the hollow body of the screw until its screw driver edge 62 is seated in the slot 50 of the head of the screw. A detent 64 is formed in the body of the tool 52 in order to prevent displacement thereof. When it is desired to turn the screw 30a, the tool 52 is withdrawn, the pin 60 extended laterally and the screw driver edge 62 fitted into the slot 50 as shown in FIG. 11. Whereupon by turning the tool by means of the pin 60, the screw 30a is advanced or retracted as will be understood.

From the foregoing, it will be seen that we have provided a locking device for sash frames of double hung windows which fully accomplishes its intended objects and is well adapted to meet practical conditions of manufacture, installation and use.

While we have illustrated and described the preferred embodiments of our invention, it is to be understood that

we do not limit ourselves to the precise constructions herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claim.

What is claimed is:

A locking device for windows, comprising an internally and externally screw threaded sleeve member adapted to be mounted in a recess in a frame member of a window sash, said sleeve member having a slotted end, an elongated hollow screw member adapted to be mounted in an opening in an oppositely disposed frame member of another window sash, a head on one end of the screw member, said head having a cross slot communicating with the hollow interior of the screw, and a tool for actuating said screw normally removably mounted in the hollow interior thereof, said tool having a hollow cylindrical body with a slot intersecting one end thereof, a pin hingedly and slidably carried by the body at the slotted end adapted to be swung through said slot to an axial position in the body and to a position at right angles to the body to serve as a handle, the other end of the body being closed and formed with a screw driver edge for insertion into the cross slot in the head of the screw when the tool is removed from the interior of the body of the screw.

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