April 2, 1946. F. McM. SAWYER 2,397,754

SHUTTER OPERATOR

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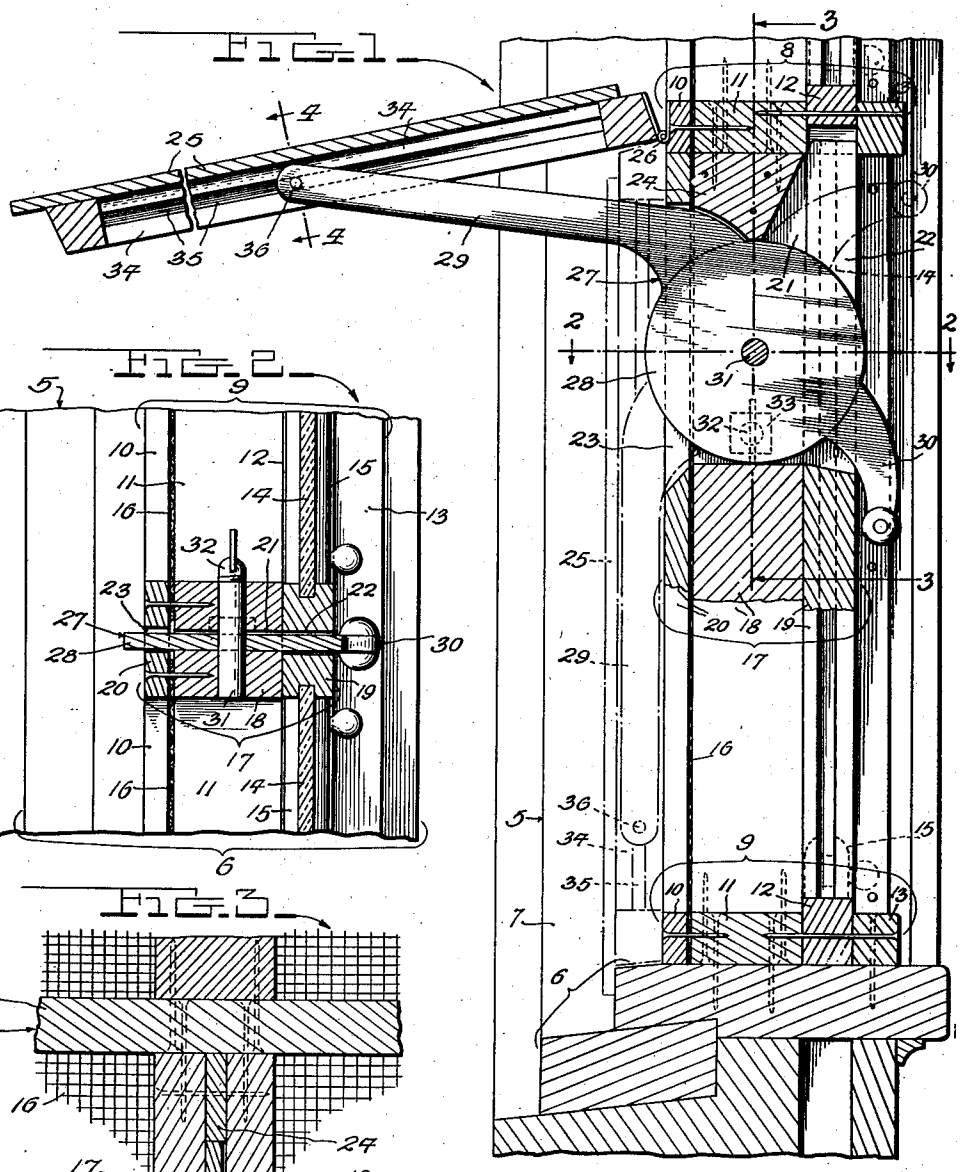


FIG. 1

FIG. 2

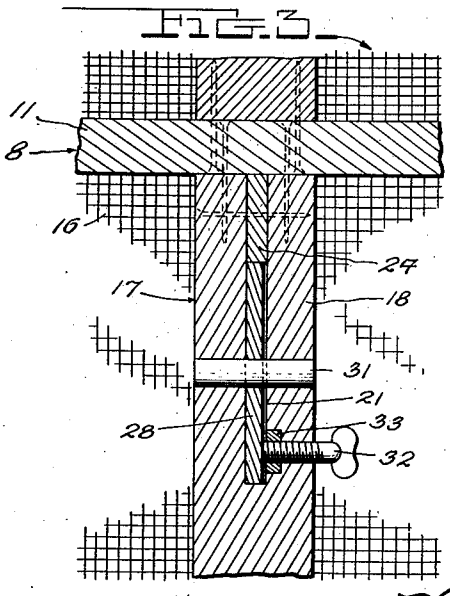


FIG. 3

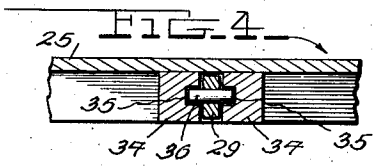


FIG. 4

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SHUTTER OPERATOR

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2 Claims. (Cl. 268—21)

The invention aims to provide a new and improved window having an externally vertically swingable shutter operable from the interior of the window by means of a convenient shutter actuator which extends through a central vertical post of the window frame and may be held in any selected position.

Figure 1 of the accompanying drawing is a vertical sectional view through the lower portion of a window constructed in accordance with the invention, showing one of the shutters and its actuating means, and obviously other shutters may be provided above said one shutter, for the intermediate and upper portions of the window.

Fig. 2 is a horizontal sectional view on line 2—2 of Fig. 1.

Fig. 3 is a vertical section on line 3—3 of Fig. 1.

Fig. 4 is a vertical section on line 4—4 of Fig. 1.

The window frame is denoted in a general way at 5, the sill is shown at 6, and one of the stiles is illustrated at 7, at the portion of Fig. 1 away from the observer. The frame includes an upper horizontal composite member 8 and a lower horizontal composite member 9, both extending from one stile to the other and secured in fixed relation therewith. The member 9 is also suitably secured to the sill 6. Each of the members 8 and 9 comprises various wooden strips 10, 11, 12 and 13 suitably secured together, the strips 12 being guiding tracks for slidable panes or sashes 14 having shoes 15 at their lower edges. The strips 13 are securing strips for suitable screening 16.

Extending between the central portions of the upper and lower members 8 and 9 and secured in fixed relation therewith, is a central post 17 which includes a main post 18, an auxiliary removable post 19, and a screen-fastening strip 20. A central vertical slot 21 is formed in the upper portion of the post 18 and other slots 22 and 23 are formed in the auxiliary post 19 and the strip 20. The slot 21 may well be formed by downwardly ripping the post 18 and securing a filler 24 in the upper end of the kerf thus made. The slot 22 may also be formed by downwardly ripping the auxiliary post 19 but the upper portion of this slot is left unoccupied for a purpose which will appear.

A vertically swingable shutter 25 of any desired construction, is hinged at 26 to the member 6, being suitably fastened to the strip 10 of this member, and a shutter-operating lever 27 is slidably and pivotally connected with said shutter. The lever 27 includes a disk-like portion 28 which substantially fills the slot 21, vertically and transversely, the peripheral edge of said portion 28 being in contact with the lower wall of said slot and with the filler block 24. Integral with the peripheral edge of the portion 28 is an outer relatively long arm 29, and also integral with said edge is an inner comparatively short arm 30 constituting a lever-operating handle. The lever is pivoted upon a pin 31 extending through the post 18 and through the center of the lever portion 28. By operating the handle 30, the lever 27 may be vertically swung to actuate the shutter 25. The lower outer portion of the block 24 is cut away to admit a portion of the arm 29 to the kerf 21 when said arm occupies its extreme shutter-open position. The lower inner portion of the block 24 is also cut away to admit a portion of the operating arm 30 when this arm occupies its extreme shutter-closed position. Thus, the filler block 24 does not interfere with the necessary movements of the shutter-actuating lever 27, yet contacts with the upper curved edge of the portion 28 of said lever in any position of the latter. The contact at this point, the contact of the lower curved edge with the portion 28 with the lower end of the kerf 21, and the close proximity of the flat sides of the portion 28 with the opposed flat sides of said kerf, insure that no insects shall enter through said kerf in any position on the lever 27.

A set screw 32 is carried by the post 18 and threaded through a nut 33 inset in one side wall of the slot 21, said set screw being adapted to force the disk portion 28 toward the other side wall of said slot and hold it in frictional contact therewith when it is desired to lock the lever 27 in adjusted position.

To slidably and pivotally connect the outer end of the lever arm 29 with the shutter 25, the construction shown in Figs. 1 and 4 may well be employed. Two parallel strips or cleats 34 are secured to the lower side of the shutter 25 and are formed in their inner sides with longitudinal grooves 35. A transverse pin 36 passes through the outer end of the arm 29 and the ends of said pin are slidably and pivotally received in the grooves 35, the arm 29 being between the two cleats 34.

From the foregoing taken in connection with the accompanying drawing, it will be seen that novel and advantageous provision has been made for carrying out the object of the invention. It will also be clear that the invention is not restricted to a number of specific details of construction herein disclosed.

I claim:

1. In a window, a frame including an upper

and a lower horizontal member, and a central vertical post extending from one of said members to the other, the upper end portion of said post having a vertical slot which opens through its inner and outer sides, said slot having parallel vertical side walls and upper and lower end walls, a shutter-operating lever having a flat disk portion of circular outline substantially filling said slot, a long outer arm integral with said disk portion for connection with a shutter, and a short inner operating arm integral with said disk portion and forming an actuating handle, a pin extending through said post and extending centrally through said disk portion to fulcrum said lever for vertical swinging, the flat sides of said disk portion and the curved edge portions thereof being substantially in contact with said side walls and end walls of said slot in all positions of said lever, and a set screw extending through said post at one side of said disk portion for forcing said disk portion frictionally against one side wall of said slot to hold said lever in selected position.

2. In a window, a frame including an upper and a lower horizontal member, and a central vertical post extending from one of said members to the other, the upper portion of said post having a kerf cut downwardly from its upper extremity and opening through its outer and inner sides, a filler block secured in the upper end of said kerf in contact with the opposed vertical sides of said kerf and extending to the upper extremity of the post, a shutter-operating lever having an intermediate disk portion received in said kerf, said disk portion having an arcuate upper edge contacting with the lower end of said filler block, an arcuate lower edge contacting with the lower end of said kerf, and flat vertical sides substantially in contact with the opposed vertical sides of said kerf, said lever having a relatively long outer shutter-actuating arm integral with said disk portion, and a relatively short inner operating arm also integral with said disk portion, the lower outer portion of said filler block being cut away to admit a portion of said outer arm to said kerf when said lever occupies its extreme shutter-open position, the lower inner portion of said filler block being cut away to admit a portion of said inner arm to said kerf when said inner arm occupies its extreme shutter-closed position, and a fulcrum pin extending through said post and said disk portion of said lever, said curved edges of said disk portion being concentric with said fulcrum pin.

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