Jan. 4, 1927. 1,613,284

C. R. MOORE

HANGER FOR STORM WINDOWS AND THE LIKE

Filed April 6, 1925

Fig. 1.

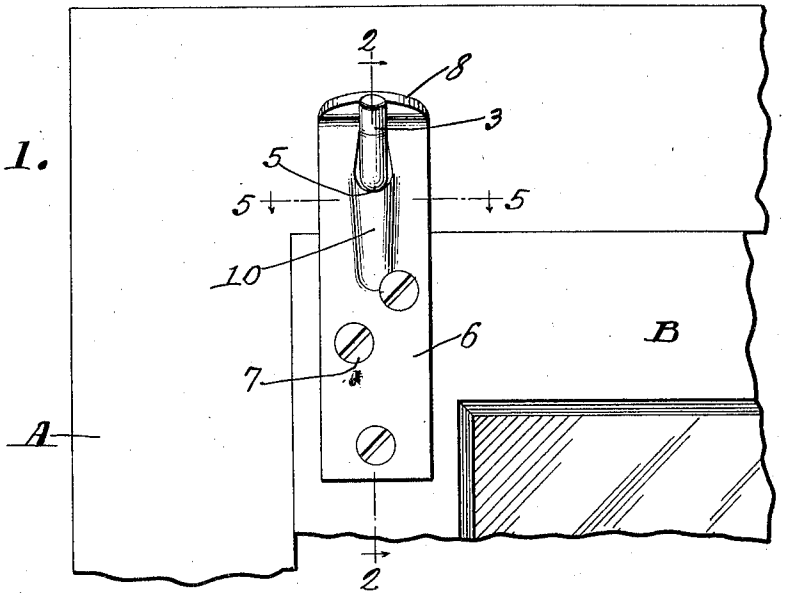


Fig. 2.

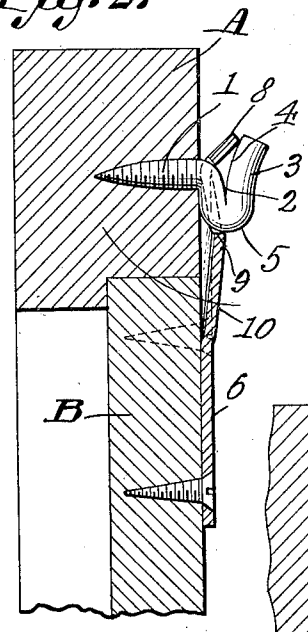


Fig. 4.

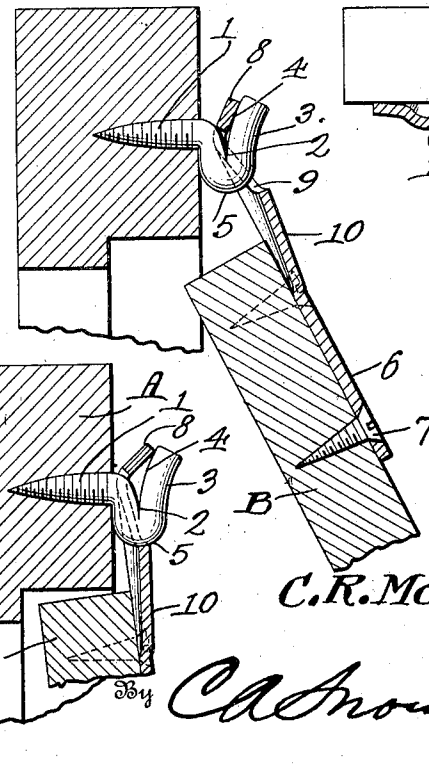


Fig. 5.

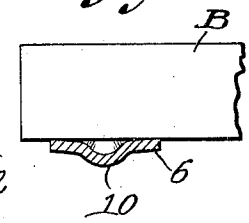


Fig. 3.

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UNITED STATES PATENT OFFICE.

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HANGER FOR STORM WINDOWS AND THE LIKE.

Application filed April 6, 1925. Serial No. 21,071.

This invention relates to hangers designed primarily for use in connection with storm windows and full length window screens such as are ordinarily suspended so as to swing from their upper ends.

The hinge connections or hangers heretofore used for this purpose have generally been objectionable because of the number of screws required to fasten the parts in place, the resultant cost of materials used, and the difficulty experienced in so placing the hangers that the supported frame will fit tightly in position at its upper end when closed. Hangers have also been objectionable because, in order to detach the frames therefrom, it has been necessary to swing the frames far out from the walls of the building and, in many cases, it has been necessary to use ladders in order to detach the frames.

It is an object of the present invention to eliminate the objections found in structures heretofore produced by simplifying the hanger, providing a structure which can be easily positioned, and by so forming the parts that the supported frame can be detached after a relatively short swinging movement outwardly from the window frame or casing.

A further object is to so construct the parts of the hanger that it becomes impossible to detach the swinging frame until it has been moved outwardly to a predetermined position.

With the foregoing and other objects in view which will appear as the description proceeds the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings,

Figure 1 is a front elevation showing one of the hangers in use.

Figure 2 is a section on line 2—2 Figure 1 showing the hanging window in closed position.

Figure 3 is a similar view showing the hanging window in its normal open position.

Figure 4 is a similar showing the hanging window swung outwardly to an extreme position to permit detaching.

Figure 5 is a section through the hanger on line 5—5 Figure 1.

Referring to the figures by characters of reference A designates a window frame or casing and B designates a portion of a storm window or the like. The hanger constituting the present invention includes a screw 1 having a head 2 in the form of a hook flattened and provided with an upwardly and outwardly curved bill 3. The hook has a substantially V-shaped space 4 between the screw and the bill and the lower portion of the hook provides a rounded heel 5 as shown.

An elongated strip 6 is adapted to be fastened to the swinging frame B by screws 7 or the like and one end of this strip is offset to provide a lip 8 extending throughout the width of the strip but at an obtuse angle to the strip. A slot 9 is formed longitudinally within a portion of the strip and extends into the angle formed by the lip, the width of this slot being slightly greater than the thickness of the hook. Strip 6 is adapted to project beyond the edge of frame B and this projecting portion has a longitudinal rib 10 struck therefrom and extending to the angle formed by the lip 8. The slot 9 is formed in this rib and, consequently, one end of the slot, to wit, that end nearest frame B, is out of line with those portions of the strip 6 engaging the frame B. This will be apparent by referring to Figure 2 of the drawing.

The structure is so proportioned that when the frame B is closed the lip 8 bridges the space 4 and rests on the bill 3 while the lower end wall of the slot 9 is supported close to the rounded heel 5. When the frame B is swung open the bill will continue to support the lip 8 but as long as the lower end wall of slot 9 is under the heel 5 it becomes impossible to lift the strip 6 out of engagement with its supporting hook. The parts retain these interlocked positions under normal conditions but when it is desired to detach and remove frame B it is merely necessary to swing the same until the lower end wall of slot 9 moves away from under heel 5 as shown for example in Figure 4. When brought to these relative positions the parts can be readily separated simply by lifting upwardly on the frame B.

By forming the slot 9 in the offset portion or rib 10 it is not necessary to swing the frame B outwardly as far as would otherwise be required in order to detach strip 6 from the hook. As the lip 8 engages the bill of hook 3, its point of contact with the bill constitutes the fulcrum about which the strip 6 swings while frame B is being moved to closed position. Thus the frame is caused to swing upwardly and inwardly about this fulcrum and against the frame or casing A, thereby to insure a tight connection or contact at the upper end of the frame B. The direction of swinging movement of the frame while being closed has been indicated by the arrow in Figure 2.

By providing the screws 1 the cost of the hanger is materially reduced and the hanger can be more quickly and easily applied than has heretofore been possible.

What is claimed is:

1. A hanger of the class described including a screw having a hook constituting a supporting member, said hook including an upstanding outturned bill and a rounded bottom portion constituting a heel, said hook having a substantially V-shaped space above the heel, a strip for attachment to a supported structure having an obliquely disposed end portion constituting a lip and a longitudinal rib extending to the lip there being a hook receiving slot in the rib extending downwardly from the lip, the free end portion of the lip normally engaging the bill of the hook to constitute a support and fulcrum for the supported structure, the lower end wall of the slot being supported normally close to and adapted to cooperate with the heel of the hook to hold the supported member against upward movement relative to the hook during the movement of said member away from normal position, said lip being movable to position flat against the bill when the lower end of the slot is withdrawn from engagement with the heel, thereby to permit raising of the supported structure to disconnect it from the hook.

2. A hanger of the class described including a supporting member having a hook including an upstanding bill and a rounded bottom portion constituting a heel, there being a tapered space within the hook above the heel, a strip for attachment to a supported structure, said strip having an obliquely disposed end portion constituting a lip and a longitudinal rib extending to the lip, there being a hook receiving slot in the rib extending downwardly from the lip, said lip normally bearing upon the bill of the hook and bridging the space in the hook to support the strip with the lower wall of the slot under and close to the heel, the point of contact between the lip and bill constituting the fulcrum of the strip during a portion of its swinging movement.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

CHARLES R. MOORE.