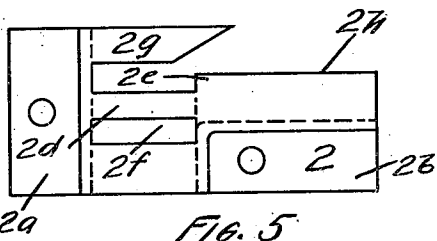
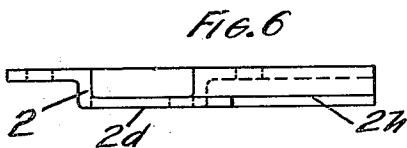
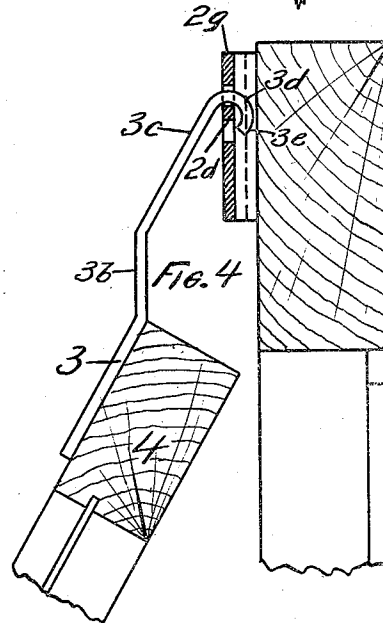
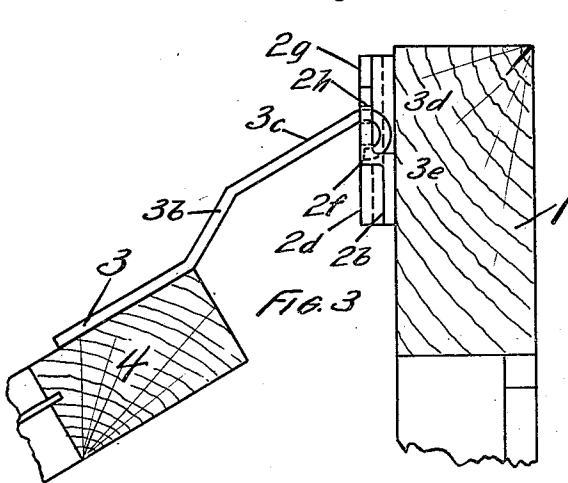
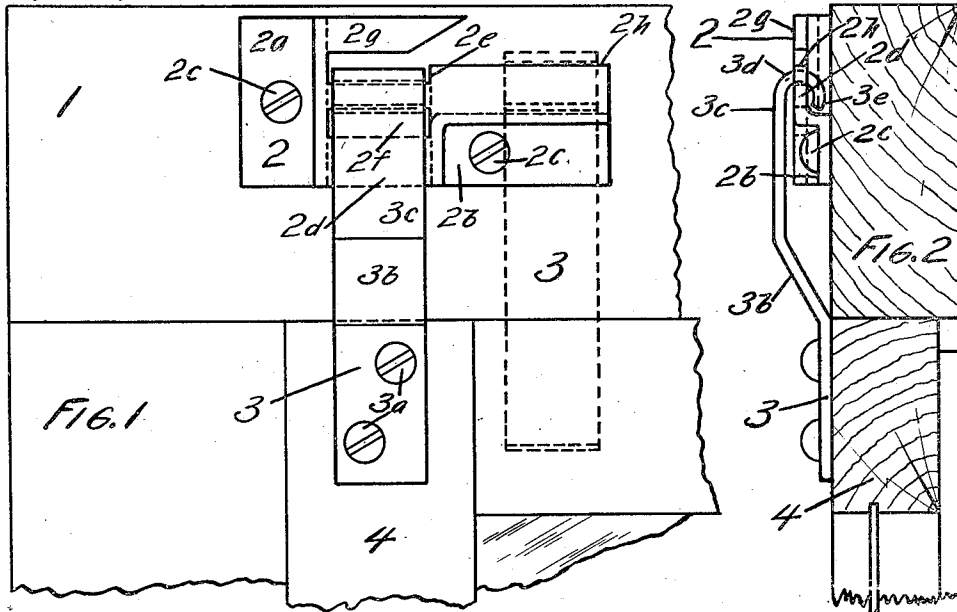


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HANGER FOR STORM WINDOWS AND THE LIKE.
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HANGER FOR STORM-WINDOWS AND THE LIKE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CARL A. JONES, a citizen of the United States of America, and resident of Minneapolis, Hennepin county, State of Minnesota, have invented certain new and useful Improvements in and Relating to Hangers for Storm-Windows and the like, of which the following is a specification.

This invention involves certain improvements in and relating to mounting or hanging outside or storm sashes or windows; and the objects and nature of the invention will be readily understood by those skilled in the art in the light of the following explanation of the accompanying drawings illustrating what I now believe to be the preferred mechanical expression or embodiment of the invention from among other forms, constructions and arrangements within the spirit and scope thereof.

The object of the invention is to improve means for mounting or hanging outside or storm sashes (windows) and the like, with the ends in view of rendering such sashes easily attachable and detachable, of reducing to the minimum possibility of such sashes becoming accidentally detached during manipulation or by the wind and of producing exceedingly durable, simple and economical means capable of performing the functions desired.

With these and other objects in view, the invention consists in certain novel features in construction and in combinations and arrangements as more fully and particularly set forth and pointed out hereinafter.

Referring to the accompanying drawings:—

Figure 1 is a front or outside elevation showing in full lines the upper parts of a window casing and storm sash having the bracket and hanger hook of my invention, mounted thereon, and showing in dotted lines the position of the hanger hook on the bracket when the hook is in position on the bracket to be removed therefrom, or applied thereto.

Fig. 2 is an end or side view of the bracket and hanger hook in sash closed position and showing portions of the window casing and sash in section.

Fig. 3 is an end or side view of the bracket and hanger hook showing the sash swung outwardly beyond a normal position, portions of the casing and sash being shown in section.

Fig. 4 is a vertical section through the bracket showing the sash swung out to position for removal or application.

Fig. 5 is a detail front elevation of the bracket.

Fig. 6 is a detail top plan of the bracket.

In the drawings, I show parts of the upper outside portion of a window casing 1, and the upper portion of an outside sash 4, such as a screen, storm or window sash formed to more or less snugly fit within and close said casing, or window frame, as will be understood by those skilled in the art.

This sash is hung or mounted for in and out swing and for application and removal, by any suitable number of sets of hangers, each consisting of a rigid bracket 2, fixed to the exterior of the building or to the window casing at a point a distance above the opening to be occupied by the sash, and a rigid hanger hook 3, fixed to the exterior of the sash and extending upwardly therefrom to operatively cooperate with the bracket.

The bracket is formed to provide two end securing feet or bases 2^a, 2^b, to fit the exterior of the building or window casing. These feet are usually perforated to receive securing bolts or screws 2^c by which the bracket is secured rigidly in position.

The bracket provides a hook receiving and supporting bridge or loop 2^d having parallel top and bottom horizontal edges, a free end guard finger 2^e arranged a distance above and approximately parallel with said bridge, and an elongated horizontal hook supporting rail or ledge 2^h in approximate continuation of said bridge longitudinally of the bracket, and slightly elevated with respect to the top edge of the bridge. The free end of the guard finger preferably overhangs the portion of said rail adjacent to the bridge and the free end of the finger and the rail are so formed or arranged as to provide a guide passage for the hanger hook in passing from the rail to the bridge and from the bridge to the rail.

The bracket throughout its full transverse or vertical width is offset outwardly or raised intermediate the securing feet, and this intermediate raised portion of the bracket provides the said guard finger 2^e and bridge 2^d, so that when the bracket is applied to the building, the bridge and finger will be spaced outwardly a distance from the exterior surface of the window casing or

building to provide a space behind the bridge in which the hook of the hanger can depend and operate. The vertical width of the bridge is determined by the radius of the curvature of the hanger hook, and the bracket is open below the lower edge of said bridge to permit forward movement of the hook bill below the bridge. This result can be accomplished by removal of the raised portion of the bracket below the bridge or by formation of slot 2^f therein.

The longitudinal horizontal top edge portion of the bracket above the securing foot or base 2^b is raised or offset outwardly to provide the upstanding horizontal longitudinally elongated hook receiving rail or ledge 2^a in approximate longitudinal alignment with or continuation of the bridge 2^d, although elevated slightly with respect to the horizontal top edge of said bridge. In other words, this rail is formed by the top edge of the portion of the bracket to the right (Fig. 1) of the bridge, and the bridge is slightly depressed with respect to said rail to provide the vertical walls 2^e at the ends of the bridge that form stops engaging the edges of the hook on the bridge and limiting the lateral movement thereof. The bridge is thus arranged to provide a depressed seat for the hook resting thereon.

The free end of the guard arm or finger 2^g overhangs the rail or ledge and is preferably beveled upwardly and outwardly from its lower edge to its top edge, to provide a throat or passageway for lateral movement of the hook from the rail to the bridge and from the bridge to the rail. This beveled end of the finger also serves as a guide for the hook.

The hanger hook projects upwardly from the top edge of the sash and is elongated and vertically arranged and its flat lower end portion fits the outer face of the upper portion of the sash 4 and is rigidly secured thereto by suitable means, such as bolts or screws 3^a.

The hanger hook is composed of a single elongated piece of flat metal usually bent or struck up to the desired form. The hanger hook is so located, formed and arranged with respect to the fixed bracket that, above the sash 4, the hanger extends upwardly and outwardly below the bracket and from thence upwardly in front of (outwardly beyond) the bracket with the upper extremity of the hanger curved inwardly and downwardly to extend inwardly across the top edge of the bracket and downwardly behind the same *i. e.* between the bracket and the exterior surface of the casing or building.

The hanger is formed (in the particular embodiment illustrated) with the straight portion 3^e that extends upwardly in front of the bracket and this portion 3^e is joined to the securing portion of the hanger on the

sash by upwardly and outwardly offset portion 3^b.

The upper end of the hanger is bent laterally to approximately semi-cylindrical form 3^d to form the hook having depending bill 3^e thus providing a hook open at its under side, with reference to the position of the parts when the sash is in normal closed position occupying the window casing. When the sash is in normal position, the hook extends inwardly across the top edge of the bridge 2^d of the bracket and occupies the notch or depression in said edge and the hook bill depends at the inner side of the bracket loop with the extremity of the bill spaced inwardly from the slot 2^f with the parts in this position, the hanger hook engaged on the top edge of the bracket, holds the upper end of the sash against outward movement from the window casing, while the window casing holds the sash against such direct upward movement as would permit the hook to move up to clear the bracket.

The sash can be removed from the casing by swinging it outwardly to a position such as shown by Fig. 4 of the drawings. In this position the top edge of the sash will clear the casing and the hook bill 3^e will be spaced inwardly from the bridge 2^d. The sash is then lifted a distance vertically moved toward the supporting ledge 2^a of the bracket, the hook passing through the passage or throat formed by the beveled end of the guard finger 2^g. When the casing has been moved sufficiently to bring the hook from beneath the guard finger and onto the supporting ledge the sash can be lifted vertically to disengage the hook from the bracket and detach the sash from the casing. This position on the supporting ledge is shown by dotted lines Fig. 1 of the drawings.

In applying a sash to the casing, the hooks are placed on and over the supporting ledges of the brackets on the casing, and holding the sash in the position shown by Fig. 4, it is slid over, guided and supported by the hooks on the ledges, until the hooks drop onto the bridges and are seated between the vertical walls at the ends of the bridges.

If the sash is swung outwardly beyond the required disengaging angle to a position such as that shown in Fig. 3, the bill 3^e of the hanger hook will enter the slot 2^f or extend beneath the under edge of the bridge, and consequently the hanger hook will be locked against disengagement from the bracket and the sash against detachment from the window casing. When the sash is swung inwardly past the required disengaging angle, such as shown in Fig. 2, the upper edge of the sash is held against vertical movement by the casing. Thus it will be seen that the hooks are locked against disengagement from the brackets and the sash

against detachment from the casing in all positions of the sash, except that position in which it assumes an angle at which the hook bills are spaced from the bridges and the top edge of the sash will clear the casing. The guard fingers preventing disengagement of the hooks from the bracket when the sash is in the position to be detached but is not moved to place the hooks on the supporting ledges of the brackets, that is, the sash is locked against detachment from the casing in all positions with the hooks in operative engagement with the bridges of the brackets.

It is evident that various changes, modifications, and variations might be resorted to in the forms and constructions shown without departing from the spirit and scope of the invention and hence I do not wish to limit my invention to the exact disclosures hereof.

What I claim is:—

1. Detachable securing means for sashes and the like comprising a bracket having a transverse bridge and a hanger having an open hook to receive said bridge and rotate thereon and project thereunder as the sash swings, said hook being vertically removable from and applicable to said bridge only when held at a certain angle, said bracket providing a guard over said bridge, said hook being laterally movable longitudinally of the bracket to clear said guard for detachment from and application to the bracket substantially as described.

2. A hanger for an outside sash and the like, consisting of a bracket having a loop providing a bridge with upper and lower edges, and a hanger at its upper end providing a downwardly opening hook formed to receive said bridge, the bill of the hook arranged to move under the lower edge of said bridge when the sash is swung beyond a certain angle, said bracket providing a longitudinal rail leading to said bridge.

3. A sash hanger comprising a bracket to be rigidly secured a distance above the sash and providing a bridge having top and bottom edges, and a hooked hanger adapted to be fixed to and project upwardly from the sash, the upper end of the hanger curving inwardly and downwardly to receive said bridge and rest on the top edge thereof, the bill of said hook arranged to move outwardly below the lower edge of the bridge when the sash is swung outwardly beyond a certain angle, said bracket providing a rigid free end guard finger a distance above said bridge.

4. A sash hanger comprising a bracket to be fixed to the exterior of the casing or building a distance above the sash, the intermediate portion of the length of the bracket being offset outwardly and formed with a longitudinal slot to provide a bridge having

top and bottom longitudinal edges, said bracket forming a longitudinal top edge rail leading to said bridge, and a free end guard finger above the bridge and overhanging said rail, and a hanger hook to be fixed to and project upwardly from the sash, the upper end of the hanger forming a downwardly opening hook to receive and rotate on said bridge, the depending bill of the hook arranged to enter said slot.

5. A sash hanger consisting of a bracket having a forwardly offset portion formed with a top-edge depressed seat and a longitudinal slot below said seat, and a hanger hook at its upper end transversely curved to form a semi-cylindrical downwardly opening hook formed to receive said offset portion and rest in said seat, the bill of the hook arranged to enter said slot, said bracket forming a guard to prevent direct upward movement of the hook from said seat.

6. A sash hanger comprising a bracket to be rigidly secured a distance above the sash and providing a bridge having top and bottom edges, a hanger adapted to be fixed to and project upwardly from the sash, the upper end of the hanger forming a hook to rest on the top edge of said bridge, the bill of said hook arranged to move outwardly below the lower edge of the bridge when the sash is swung outwardly beyond a certain angle, and a rail in approximate longitudinal continuation of said bridge and providing a supporting guideway for said hook when moving to and from said bridge.

7. Detachable securing means for sashes and the like, comprising a bracket having a transverse bridge, a guard finger above said bridge, a guide rail extending from said bridge, and a hanger having an open hook to receive said bridge and rotate thereon and project thereunder as the sash swings, said hook being laterally removable from and applicable to said bridge under said finger and to and from said rail only when held at a certain angle, substantially as described.

8. Detachable securing means for sashes and the like, comprising a bracket having a transverse bridge and a hanger having an open hook to receive said bridge and rotate thereon and project thereunder as the sash swings, said hook being vertically removable from and applicable to said bridge only when held at a certain angle, with the sash swung outwardly to a position to clear the window opening, said bracket being formed to be secured a distance above the window opening, said hanger being formed to be secured to and project vertically from the sash, substantially as described.

9. A hanger for an outside sash and the like, consisting of a bracket providing a bridge with upper and lower edges, and a hanger at its upper end providing a downwardly opening hook formed to receive said

bridge, the bill of the hook arranged to move under the lower edge of said bridge when the sash is swung beyond a certain angle, said bracket being formed to permit vertical application to and removal of the hook from the bridge when the hanger is in a certain position, and lateral movement of the hook on removal from and application to the bracket.

10. A sash hanger comprising a bracket to be rigidly secured a distance above the sash and providing a bridge having top and bottom edges, and a hooked hanger adapted to be fixed to and project upwardly from the sash, the upper end of the hanger curving inwardly and downwardly to receive said bridge and rest on the top edge thereof, the bill of said hook arranged to move outwardly below the lower edge of the bridge when the sash is swung outwardly beyond a certain angle.

11. A sash hanger comprising a bracket to be fixed to the exterior of the casing or building a distance above the sash, the intermediate portion of the length of the bracket

being offset outwardly and formed with a longitudinal slot to provide a bridge having parallel top and bottom longitudinal edges, and a hanger hook to be fixed to and project upwardly from the sash, the upper end of the hanger forming a downwardly opening hook to receive and rotate on said bridge, the depending bill of the hook arranged to enter said slot.

12. A sash hanger consisting of a bracket having a forwardly offset portion formed with a top-edge depressed seat and a longitudinal slot below said seat, and a hanger hook at its upper end transversely curved to form a semi-cylindrical downwardly opening hook formed to receive said offset portion and rest in said seat, the bill of the hook arranged to enter said slot, the bracket and hook being so relatively formed as to require vertical and lateral movement of the hook when in a certain position to permit removal of the hook from the bracket.

CARL A. JONES.