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F. MASTRANGELO ET AL
STORM DOOR AND WINDOW HARDWARE

2,569,941

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Fig. 1

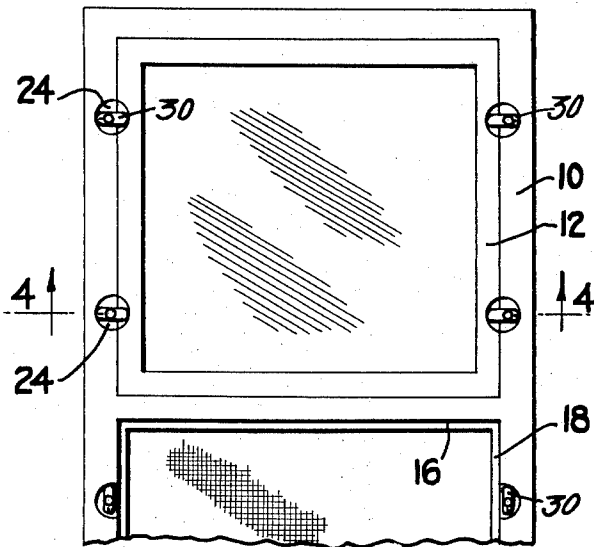


Fig. 2

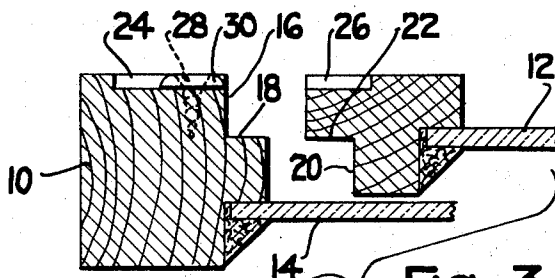
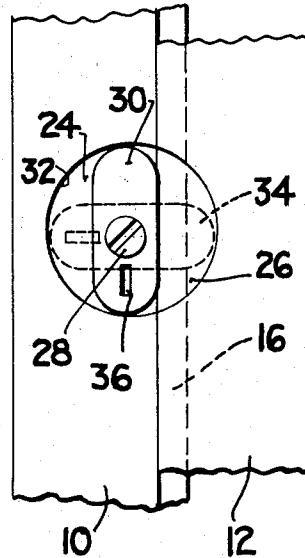


Fig. 3

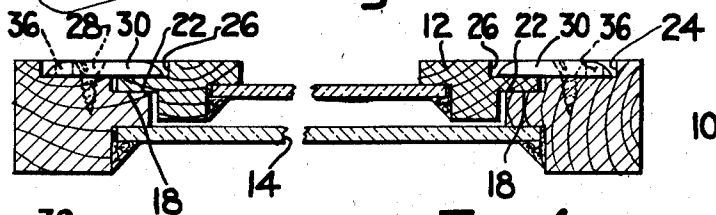


Fig. 4

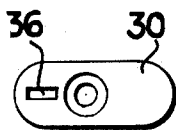


Fig. 5

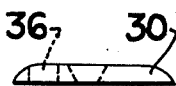


Fig. 6

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STORM DOOR AND WINDOW HARDWARE

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2 Claims. (Cl. 20—56.1)

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This invention relates to new and improved storm door and window hardware or fastenings. The principal object of the invention resides in the provision of a new and improved storm door or window fastener which is so constructed as to be flush with the surfaces of the storm sash or below the same whereby the entire storm window and fastenings may be changed and stored in flatwise contacting relation and are completely out of the way at all times so as to fail to interfere with raising or lowering conventional permanent windows.

A further object of the invention resides in the provision of a storm door and window fastener located in a recess in a frame and adapted to have an unlocking position wholly contained within said recess and a locking position wherein part of the fastener extends outwardly of the recess into overlapping relation with a complementary recess in another member or storm sash so as to clamp the same, no part of the fastener extending upwardly of the recess so that the entire device is flat and easily stored and transported.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawing in which

Fig. 1 is a view in elevation showing the present invention in operation, holding a storm sash in position, parts being broken away;

Fig. 2 is an enlarged view of one of the fasteners showing the same in the frames;

Fig. 3 is an enlarged section illustrating how the storm sash is put together;

Fig. 4 is an enlarged section on line 4—4 of Fig. 1;

Fig. 5 is a top plan view of the fastener per se; and

Fig. 6 is an edge view thereof.

As shown in Fig. 1, the frame indicated by the reference numeral 10 may be either a storm sash frame or a permanent window installation or the like; in any case, there is also shown a removable storm sash generally indicated at 12 and it is the two members 10 and 12 which are to be secured together in position.

The member 10, whether a permanent window frame or a storm sash, may be provided with a permanent window pane 14. In any case, this frame is rabbeted as indicated at 16 forming a shoulder 18 which extends all the way around the opening of the frame. The removable frame

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12 is provided with a rabbet 20 which forms a shoulder 22 to cooperate with shoulder 18 and overlap the same so that a fastener may be used to clamp shoulder 22 to shoulder 18.

The frame 10 is recessed as at 24 substantially on the arc of a circle, and this recess is larger than a semi-circle. The frame 12 is correspondingly recessed as indicated at 26 and also substantially on the arc of a circle but less than a semi-circle; the two recesses 24 and 26 together making up a single depression approximately in the nature of a circle.

In the depression or recess 24, there is pivoted as by a screw 28, a fastener 30 of elongated form. The pivot axis of the fastener 30 is slightly to the left of the center of the circle so that as the fastener 30 is pivoted counterclockwise in Fig. 2, it will strike the edge of the recess at 32 so that it is clear it is intended to be rotated in the opposite direction to the dotted line position 34 to overlay the frame 12 to clamp the same to shoulder 18. Likewise from the dotted line position, as seen in Fig. 2, the fastener 30 cannot rotate except to a slight extent further in a clockwise direction so that to unlock the frame 12, the operator will see that it is necessary to turn the fastener in the reverse direction.

A slot 36 is provided for a screw driver so as to turn the same even though the entire member 30 is down below the top edge of the recesses 24, 26, and provides no wing or other finger actuator.

The present fasteners provide means to removably secure a pair of frames or other members together without any projecting parts, finger holds, or the like, so that the assembled pairs, as shown in Fig. 4, may be stacked, transported, or stored in flat condition without damage and taking up a minimum of space.

The fasteners can be used for combination storm doors, conventional storm sash, and in any other relation where desired or convenient, as well as in the window described.

Having thus described our invention and the advantages thereof, we do not wish to be limited to the details herein disclosed otherwise than as set forth in the claims, but what we claim is:

1. In combination with an outer frame member forming a window opening, a window sash fitting said opening, said frame and sash being provided with complementary shallow recessed portions which, when juxtaposed, form a single recess with a circular peripheral wall extending

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to the surface of the frame and sash, one of said recessed portions being larger than the other, and means for detachably fastening said frame and sash in assembled position comprising an elongated fastening member having a length substantially equal to the diameter of the combined recess and fitting wholly within said recess, said fastening member being pivoted within the larger of said recessed portions, and its pivot being slightly eccentric with reference to the combined recess in the direction of the larger recess.

2. The combination as set forth in claim 1 wherein the elongated fastening member is provided with a tool receiving slot in one end thereof.

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