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C. F. POLACK

2,226,072

SASH FASTENER

Original Filed Oct. 11, 1932

Fig. 1.

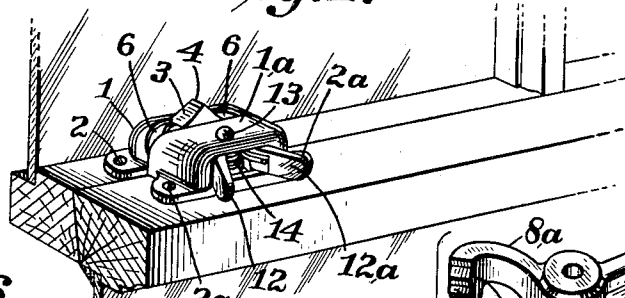


Fig. 6.

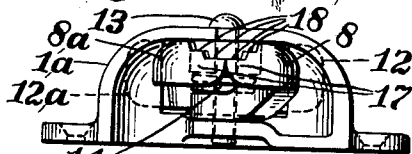


Fig. 8.

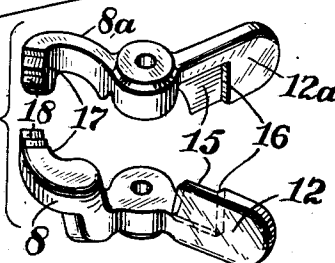


Fig. 2.

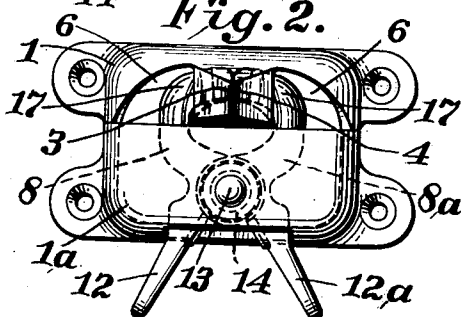


Fig. 3.

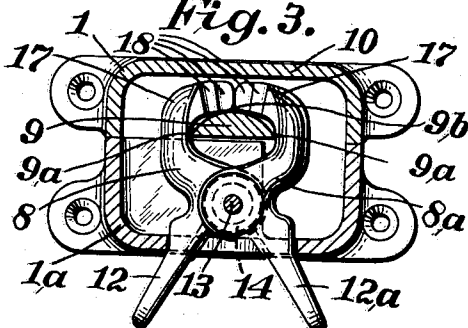


Fig. 5.

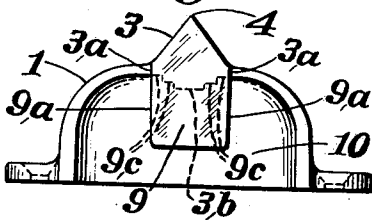


Fig. 4.

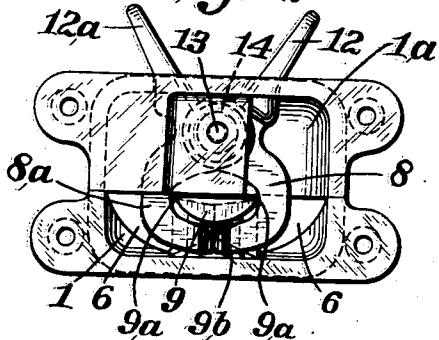
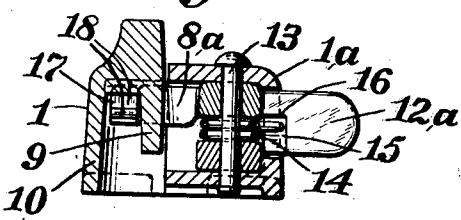


Fig. 7.



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UNITED STATES PATENT OFFICE

2,226,072

SASH FASTENER

Charles Francis Polack, York, Pa.

Substitute for abandoned application Serial No.
637,306, October 11, 1932. This application
May 20, 1940, Serial No. 336,283

4 Claims. (Cl. 292-340)

The invention is designed to provide a sash fastener of economical construction easy to operate and possessing durability and effectiveness in use.

The invention consists in the features and combination of parts hereinafter described and particularly pointed out in the claims.

In the drawing:

Figure 1 is a perspective view of the fastener.

Fig. 2 is a top plain view of the fastener.

Fig. 3 is a horizontal sectional view showing certain of the parts in plan.

Fig. 4 is a bottom plan view.

Fig. 5 is a front view of the standard or shell adapted to be fixed to the meeting rail of the upper sash.

Fig. 6 is a rear view of the section of the fastener which is adapted to be attached to the meeting rail of the lower sash.

Fig. 7 is a transverse vertical sectional view through the fastener.

Fig. 8 is a perspective view of the companion detent members.

In this drawing, 1 indicates a shell adapted to be secured by screws at 2 to the meeting rail of the upper sash, and 1a represents a shell or casing adapted to be secured by screws at 2a to the meeting rail of the lower sash.

The shell or standard 1 is provided with an upwardly extending projection 3, the lateral faces of which are inclined and upwardly convergent, meeting along a line 4 at the upper ends of the said faces. This projection extends above the shell and is cast in one piece therewith.

The shell or standard 1 at its top and at each side of the base portion of this upwardly extending projection is provided with an opening or recess 6. These recesses open out to the front of the shell to permit the passage therethrough of detents or dogs 8, 8a carried by the shell or casing 1a, as will be referred to later. The shell 1 is also provided with a projection 9 extending downwardly, said projection being under and vertically in line with the upwardly extending projection 3. This downwardly extending projection has a flat front face in the same vertical plane with the front face of the upwardly extending projection, or, in other words, this front face of projection 9 is in the same vertical plane with the front face of the shell or casing 1. This projection 9 is spaced apart from the rear wall 10 of casing or standard 1, and it is rounded on its rear side forming substantially a cam surface sloping from the lateral edges 9a, 9a of the downward projection rearwardly to a

meeting or high point 9b at the transverse center line of the shell.

The detent means 8, 8a pivotally mounted on the shell or casing 1a attached to the meeting rail of the lower sash provide a balanced locking arrangement by reason of the fact that said detents are in a number of respects complements of each other, and are adapted to effect release of the fastening by simultaneously pressing their handle portions 12, 12a towards each other, or, in other words, towards the transverse center line of the appliance.

These detents are pivoted within shell 1a upon a vertical pin 13 which is mounted in the shell in any suitable manner, as by riveting its ends over upon the adjacent part of the shell. The handle or finger portions 12, 12a of these detents or dogs extend towards the front, and they are located in the same horizontal plane. They are normally in forwardly divergent relation to each other, being stressed for this purpose by a spring 14 coiled around the vertical pivot pin and having its ends bearing in recesses or depressions 15 in the inner side faces of the finger portions of the detents. These ends of the spring are confined in place for proper operation of the detents by the shoulders 16 defining the recesses in the finger portions of the detents.

The rear portions of these detents or dogs are in the form of hooked portions 17 extending towards each other in the same horizontal plane so that their extreme ends will normally meet. These hooked or convergent rear ends of the detents are adapted to embrace the downward projection 9. These extreme rear ends engage the rounded or cam shaped rear face of said projection when the fastener is in locked condition. The rear hooked ends of the detents, under the action of the spring 14, ride up the cam shaped rear face of the projection 9, and thus draw the shells together, and with a balanced action the pressure of the dogs or detents in engagement with the projection due to the spring being substantially equally distributed between the two detents and the pressure of one detent being in a direction opposite to that of the other detent. Pressure on the finger pieces or handles moving them towards each other will separate the rear hooked ends of the detents to disengage them from the rear shell 1 and its projection 9, and make them align with the notches or recesses 6 so that then the lower sash may be raised or the upper sash lowered, the detent in this action finding free passage through the recesses 6.

As above stated, the finger or handle portions

of the detents are positioned opposite to each other in the same horizontal plane. This is true also of the rear hooked ends of the detents. The intermediate portions of the detents, however, are displaced relative to each other so that one lies above the other and thus both can be located on the same pivot pin. The upwardly extending projection 3 with inclined sides provides means by which the detents will be automatically operated as the meeting rails are brought together so that said detents will be separated at their rear ends to pass through the recesses 6 to get into position to snap together beneath the projection 3, and to engage the rear cam shaped face of the downward projection 9. The upwardly extending bevelled projection 3 provides cam inclines of sufficient extent to insure a gradual spreading of the rear ends of the detents so that excessive strain and shock on the parts while they are being brought into locked position will be avoided.

The upper surfaces of the rear ends of the detents are in downward convergent relation to each other, generally speaking. More specifically speaking, they are of stepped formation, as at 18, said steps rising in opposite directions from substantially the meeting rear ends of said detent. This formation provides a compensating means for variations in the relation of one meeting rail to the other within certain limits. Here also we have a balanced action between the two detents, the stepped shoulders on the two detents being similarly disposed to the terminal portions of said detents, so that both detents will present their similarly disposed shoulders for engagement with the complementary part of the shell, according to the variations in the positions of the sash rails when the window is closed.

The projection 3 is connected with the rear wall of standard 1 and lies forward of this vertical plane of said wall. The under surface of this connection has opposite side portions which slope downwardly from the side edges of the base of the projection at 3a to the central face 3b. These side portions are stepped at 9c to cooperate with the stepped formation 18 of the upper sides of the ends of the detents.

The under sides of the extreme rear ends of the hooked portions of the detents are inclined or curved upwardly so that they will engage the upper point of projection 3 with certainty, despite any slight misalignment, and they will have an easy sliding action in respect to said inclined surfaces of said projections.

By my invention the sashes will be held against rattling and compensation will be provided for a sash that sags or in which irregularity may exist.

This application is a substitute for abandoned application Serial No. 637,306, filed October 11, 1932, by Charles Francis Polack.

I claim:

1. A keeper member for sash fasteners comprising a support having a projection, the rear face of which is cam shaped having its high part at the transverse center line of the member, the upper part of said projection having a rearward portion providing an under surface to the rear of and substantially at right angles to the rear face of the projection, said under surface having opposite side portions which slope downwardly toward the center of the member, said rear cam shaped face being adapted to be engaged by a pair of latch members to draw the keeper member laterally toward them, and said downwardly sloping side portions being adapted to also be engaged by the latch members and afford a compensating means for variations in the relation of one meeting rail to the other.

2. A keeper member for sash fasteners comprising an upstanding support having a depending projection spaced from it and connected to the support by a connecting portion, the rearward face of said projection being cam shaped and having its high part at the transverse center line of the member, the under face of said connecting portion having opposite side portions which slope downwardly toward the center of the member, said cam shaped face being adapted to be engaged by a pair of latch members to draw the keeper members laterally toward the latch members, and said opposite side portions being adapted to be engaged by the latch members and afford a compensating means for variations in the relation of one meeting rail to the other.

3. A keeper member according to claim 2 in which said opposite side portions are shouldered in stepped relation.

4. A keeper member for sash fasteners comprising a shell having an upwardly extending projection with its sides diverging downwardly from the transverse center line of the member, a downwardly extending projection in line with the first mentioned projection and spaced from the wall of the shell and having a cam shaped rear face, said cam face having its high point at the transverse center of the member, said shell at the sides of the base of the beveled projection having open spaces or recesses for the passage of latch members, the under side of the upwardly extending projection being generally sloped from its edges downwardly toward the center of the fastener and being shouldered in stepped relation, said downwardly diverging sides being adapted to separate a pair of latch members, said cam shaped face being adapted to be engaged by the latch members to draw them laterally toward the keeper member, and said sloped portions of said underside being adapted to be engaged by the latch members and afford a compensating means for variations in the relation of one meeting rail to the other.

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