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SASH LOCK

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Fig. 1

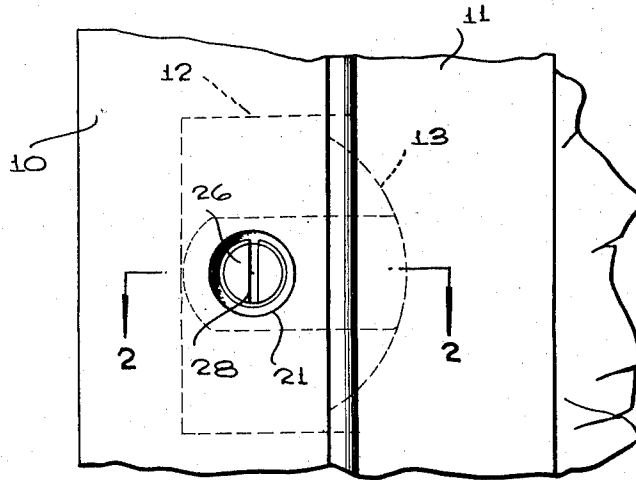


Fig. 2

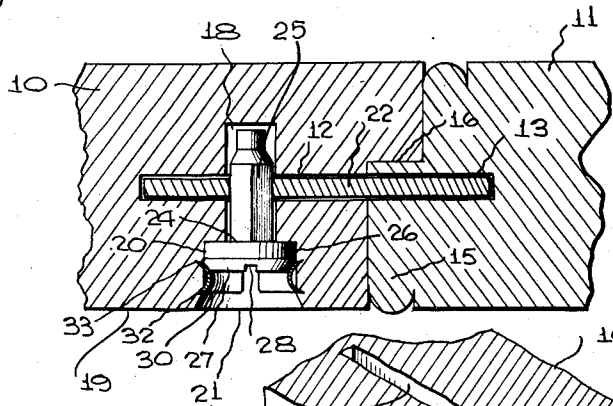
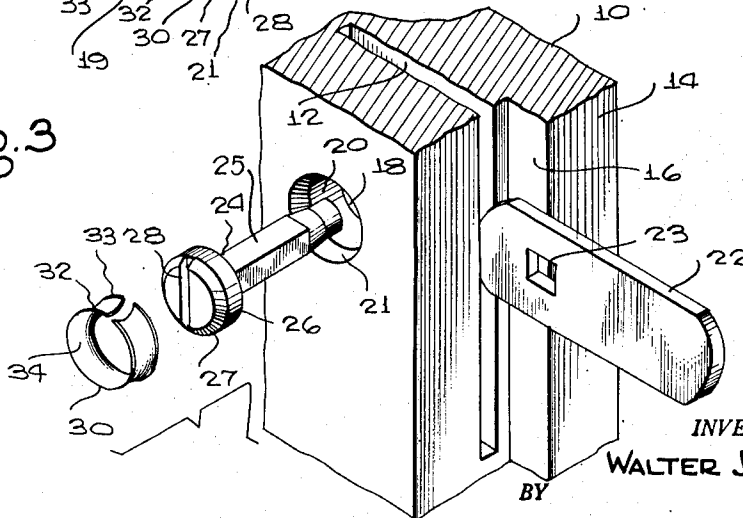


Fig. 3



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SASH LOCK

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3 Claims. (Cl. 292—194)

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This invention relates to simple locks for securing sashes, panels or similar structures in doors or window frames and more particularly to a lock for securing storm sash or screens in doors or in window frames.

It is among the objects of the invention to provide an improved sash lock which can be easily mounted in a door or window frame and engaged with a storm sash or screen mounted in the door or window frame to firmly secure the sash or screen in place; which can be locked or unlocked by means of a simple tool, such as a screw driver; which includes a securing ring which is expanded into the material of the door or window frame in which the lock is mounted and positively retains the lock in the door or frame once it is mounted therein; and which is simple and durable in construction, economical to manufacture, easy to install, and neat and attractive in appearance.

Other objects and advantages will become apparent from a consideration of the following description and the appended claims in conjunction with the accompanying drawing wherein:

Figure 1 is a fragmentary front elevational view of a supporting frame member, a supported frame member and a lock illustrative of the invention securing the supported member in position relative to the supporting member;

Figure 2 is a fragmentary cross sectional view on the line 2—2 of Figure 1; and

Figure 3 is an exploded perspective view of the lock and a fragmentary portion of the frame member in which the lock is mounted.

With continued reference to the drawing, the numeral 10 indicates a supporting frame member, such as one of the side rails of a door, and the numeral 11 indicates a supported frame member, such as a side rail of a storm sash mounted in the door. The member 11 has its outer edge disposed against the inner edge of the member 10 and the member 10 is provided with a longitudinally extending notch or kerf 12 disposed substantially midway of the thickness of this member and opening to the inner edge thereof. The member 11 is provided with a longitudinally extending notch or kerf 13 disposed substantially midway of the thickness thereof and opening to the outer edge of the corresponding member in registry with the open side of the kerf 12 in the member 10. The kerfs 12 and 13 are of elongated, rectangular cross sectional shape having a thickness which is a fractional part of the thickness of the members 10 and 11 in which they are provided and have their sides substantially parallel

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to the sides of the corresponding members. These kerfs may be conveniently provided by cutting into the corresponding edges of the wooden members 10 and 11 with a circular saw of proper thickness.

The members 10 and 11 are rabbeted at their adjacent edges to provide overlapping tongues 14 and 15 which engage along flat shoulders, as indicated at 16, parallel to the side faces of the members to limit movement of the supported member 11 inwardly of the supporting member 10.

The supporting member 10 is provided with a blind bore 18 which extends through the kerf 12 in this member and to one side of the member, as indicated at 19. This bore 18 is provided at its open end with a counterbore 20 and the outer end of the counterbore is beveled, as indicated at 21.

A flat tongue 22 of elongated, substantially rectangular shape is disposed in the kerf 12 in the supporting member 10 and is movable into the kerf 13 in the supported member 11, as shown in Figure 2. This tongue 22 has near one end thereof an aperture 23 of non-circular shape, and a pin 24 is received in the bore 18 and has a shank 25 of non-circular cross sectional shape extending through the aperture 23 in the tongue 22 and into the end portion of the bore 18 at the side of the kerf 12 remote from the open end of the bore.

The pin 24 has at one end of the shank 25 a head 26 of cylindrical shape received in the counterbore 20 and this head is provided at its end remote from the shank with a beveled edge 27 and with a transversely extending groove or tool slot 28 in which a tool, such as a screw driver, can be engaged to turn the pin.

The counterbore 20 is deeper than the thickness of the head 26 of the pin so that the outer end of the head is disposed within the counterbore and a split ring 30 is disposed in the counterbore between the beveled edge 27 of the head and the beveled outer end 21 of the counterbore.

This ring 30 is a thin-walled structure of resilient metal having a transversely concave outer or peripheral surface 31 and outwardly directed sharp edges 32 and 33 one at each end thereof, and a transversely convex inner surface 34.

The ring 30 is expanded in the counterbore so that its sharp edges 32 and 33 are embedded in the wood of the member 10 surrounding the counterbore 20 and the convex inner surface of the ring bears against the beveled edge 27 of the head of the pin 24 to maintain the pin in

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the bore 18 once the lock has been installed in the member 16. The pin is thus supported in the bore 18 in a manner such that it does not wear the member 16 surrounding the bore or the counterbore 20 by rotational movements of the pin and so that it cannot fall out of the bore at any position of the member in which it is mounted.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is, therefore, to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are, therefore, intended to be embraced therein.

What is claimed is:

1. In combination with a supporting frame member having a longitudinally extending kerf in one edge thereof and a bore extending perpendicularly through said kerf and opening to one side of said member and provided at said one side of the member with a counterbore and a beveled end portion at the outer end of the counterbore, a lock comprising a flat tongue disposed in the kerf in said frame member and movable into a corresponding kerf in an associated frame member, said tongue having an aperture of non-circular shape therein registering with said bore, a pin received in said bore and including a shank of non-circular cross sectional shape extending through the aperture in said tongue and a head of cylindrical shape on one end of said shank and received in said counterbore, and a split ring disposed in said counterbore at the outer end of said head and in engagement with the latter, said ring having a transversely convex inner surface engaging the outer edge of said head to retain said pin in said bore, and annular sharp edges one at each end thereof and being expanded in said counterbore so that said sharp edges are engaged in the material around said counterbore.

2. In combination with a supporting frame member having a longitudinally extending kerf in one edge thereof and a bore extending perpendicularly through said kerf and opening to one side of said member and provided at said one side of the member with a counterbore and a beveled end portion at the outer end of the counterbore, a lock comprising a flat tongue disposed in the kerf in said frame member and movable into a corresponding kerf in an associated frame member, said tongue having an aperture of non-circular shape therein registering with said bore, a pin received in said bore and including a shank

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of non-circular cross sectional shape extending through the aperture in said tongue and a head of cylindrical shape on one end of said shank and received in said counterbore, and a split ring disposed in said counterbore at the outer end of said head and in engagement with the latter, said ring having a transversely concave outer surface and annular sharp edges one at each end thereof and being expanded in said counterbore so that said sharp edges are engaged in the material around said counterbore, said head having a beveled edge on its outer end and said ring having a transversely convex inner surface engaging the beveled edge of said head.

3. In combination with a supporting frame member having a longitudinally extending kerf in one edge thereof and a bore extending perpendicularly through said kerf and opening to one side of said member and provided at said one side of the member with a counterbore and a beveled end portion at the outer end of the counterbore, a lock comprising a flat tongue disposed in the kerf in said frame member and movable into a corresponding kerf in an associated frame member, said tongue having an aperture of non-circular shape therein registering with said bore, a pin received in said bore and including a shank of non-circular cross sectional shape extending through the aperture in said tongue and a head of cylindrical shape on one end of said shank and received in said counterbore, and a split ring disposed in said counterbore at the outer end of said head and in engagement with the latter, said ring having a transversely concave outer surface and annular sharp edges one at each end thereof and being expanded in said counterbore so that said sharp edges are engaged in the material around said counterbore, said head having a beveled edge on its outer end and said ring having a transversely convex inner surface engaging the beveled edge of said head, said counterbore having a depth materially greater than the thickness of said head and said ring being disposed between the beveled outer end of said counterbore and the beveled edge on the outer end of the head of said pin.

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