April 27, 1954 W. R. SMITH 2,676,826

SASH FASTENER

Filed July 12, 1951

Fig. 1

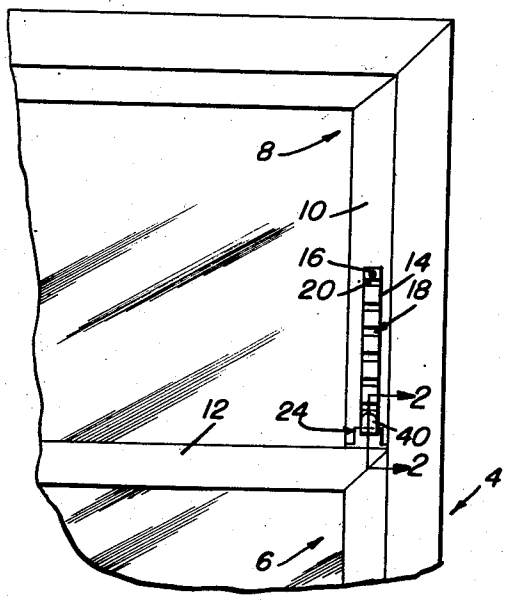


Fig. 2

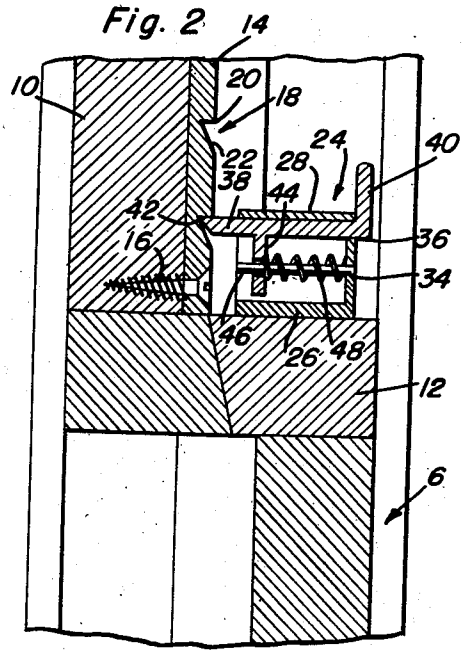
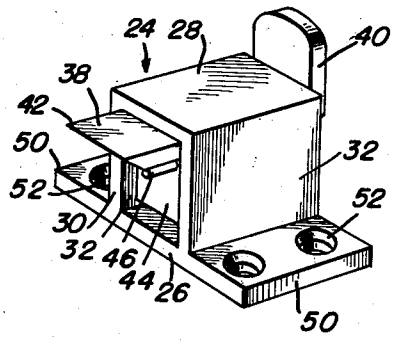


Fig. 3



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SASH FASTENER

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2 Claims. (Cl. 292—175)

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The present invention relates to certain new and useful improvements in sash fasteners and has particular reference to a fastener construction which is especially, but not necessarily, adapted for use in connection with double-hung sashes, and the principal purpose of the fastener is to enable one to open the lower sash for effectively ventilating a room space and locking said sash in the position to which it has been moved, whereby to render the window construction substantially burglar-proof.

As implied by the preceding introductory statement, sash fasteners in this special category are not new. They are of many and varied forms and constructions and are generally characterized by keeper means on one of the rails of the upper sash and coacting latch-bolt means cooperable with the keeper means and fixedly mounted on the upper rail of the lower sash. One of the objects of the instant invention is to structurally, functionally and otherwise improve on prior art sliding-type sash fasteners, and in so doing, to provide a simple, economical and practical construction in which manufacturers, retailers and users will find their essential needs and requirements fully met, contained and satisfactorily available.

One feature of the invention has to do with a keeper bar which is screwed or otherwise fastened to the upper sash and which is provided at vertically spaced points with transverse keeper notches, said notches being shaped to provide abrupt stop shoulders and the coacting end of the latch bolt being beveled for effective retentive association with said shoulders.

Another object of the invention has to do with the projectable and retractable latch unit, this being an L-shaped plunger provided with a depending stabilizing and spring-thrust plate.

Another object of the invention has to do with the especially constructed housing or casing for the latch unit, said casing being closed except at one end, being provided with a spring mounting pin and an especially located assembling and guiding slot for the bolt portion of said latch unit.

Other objects and advantages will become more readily apparent from the following description and the accompanying sheet of illustrative drawings.

In the accompanying sheet of drawings, wherein like numerals are employed to designate like parts throughout the same:

Figure 1 is a fragmentary elevational view of a double-hung window showing upper and lower

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sliding sashes and disclosing the improved sash fastener, its general construction and its position when in use.

Figure 2 is an enlarged fragmentary sectional and elevational view, taken on the vertical line 2—2 of Figure 1, looking in the direction of the arrows.

Figure 3 is a perspective view of the sash fastener per se.

Referring now to the drawing, and first to Figure 1, the window frame is denoted at 4, the lower sliding sash at 6, and the upper sliding sash at 8. The invention disclosed is concerned with a vertical end rail 10 of the upper sash and the top rail 12 of the lower sash.

The keeper member or unit comprises a sturdy metal or equivalent bar 14 which is fitted flat against the rail 10 and secured thereto by screws or the like 16. This strip or bar, which is rigid, is provided at vertically spaced points with transversely disposed keeper notches 18 arranged an inch or so apart. Each notch has a horizontal, right angularly disposed stop shoulder 20 and a latch releasing and ratcheting incline or surface 22.

The fastener proper comprises a substantially rectangular one-piece casing denoted by the numeral 24. This comprises a flat bottom wall 26, a flat top wall 28, flat vertical side walls 30 and 32, and a correspondingly flat end wall 34. The casing is open at one end which may be called the front, and this open front faces the keeper bar. There is a slot 36 at the top of the end wall 34.

The projectable and retractable plunger or latch unit comprises an L-shaped portion embodying a long arm 38 and a short arm 40. The free end of the long arm, which constitutes the latching bolt, is beveled as at 42. The opposite end of this latch bolt extends through the slot 36 and disposes the short arm 40 on the exterior, where it constitutes a suitable available finger pull. The finger pull projects to a plane or position above the top wall 28, where it is easy to grasp. The stated unit also includes a depending thrust and stabilizing plate 44 and this terminates short of the interior of the bottom wall and has sliding contact with the interior surfaces of the side walls. The spring 10 is denoted at 46 and is carried by the end wall 34 and projects through the center of the casing and pierces the thrust plate 44 by way of a suitable opening in said plate. The pin constitutes an assembling and retaining element for the coil spring 48 which surrounds the pin and bears at

one end against the wall **34** and at the opposite end against the thrust plate **44**. The bottom, as best shown in Figure 3, has end extensions providing attaching ears **50** and the latter are provided with screw-holes **52**, whereby to provide a convenient and satisfactory arrangement for mounting and securing the means **24** on the stated sash rail **12**. The coacting bevels **22** and **42** permit the upper sash to be slid upwardly to a closed position, or pulling down lower sash to a closed position, by way of the obvious ratcheting action. When the latch is released by hand, the upper sash may, of course, be moved freely without interference. When the latch is in latching position, the beveled end projects into the keeper notches and engages with the firm retaining shoulders **20** in an obvious manner.

The fastener is, obviously, constructed primarily to enable the user to opeen the lower sash to a limited extent for room or attic ventilating purposes and to fasten said sash securely to render it burglar-proof.

Having described the invention, what is claimed as new is:

1. A sash fastener comprising a substantially rectangular casing having flat top, bottom and side walls, one end wall, and being open at an opposite end, said end wall having a slot paralleling and situated adjacent to said top wall, a one-piece projectable and retractable plunger of general L-shaped form in edge elevation, said plunger including long and short arms, said long arm being rectangular in cross-section corresponding in shape and size with said slot, being of a length greater than the length of the casing and having at least a flat top side in firm fitting and sliding contact with the interior surface of the top wall of said casing, said short arm providing a finger-pull, the latter being contactable with said end wall and having a free end portion projecting to a plane above the plane of said top wall, a rectangular thrust plate integrated with and depending from the underside of the intermediate portion of said bolt and fitting snugly but slidably within the confines of said casing and having sliding contact with the interior surfaces of the side walls of the casing, a pin rigidly secured to said end wall at one end and having its opposite end passing through and beyond an opening provided therefor in said thrust plate, and a coil spring surrounding the pin and bearing at one end against said thrust plate and at its opposite end against said end wall.

2. A sash fastener comprising a substantially rectangular casing having top, bottom, and side walls, one end wall, and being open at one end, said walls cooperating in defining an open ended chamber, the interior surfaces of said top and side walls being flat, a one-piece projectable and retractable plunger generally L-shaped in side elevation and said plunger including long and short arms, said long arm being rectangular in cross-section and of a width corresponding to the width of said chamber, having one flat surface in sliding contact with the cooperating flat interior surface of the top wall and being of a length greater than the length of said chamber and having one end projecting through and beyond the open end of the chamber, the other end projecting through and beyond a slot provided therefor in the aforementioned end wall, said short arm being disposed exteriorly of the end wall and having a free end portion projecting to a plane above the plane of said top wall for convenient gripping and operation and providing a finger pull, a rectangular thrust plate integrated with and depending from the underside of the intermediate portion of said long arm and fitting snugly but slidably within the confines of said chamber and having vertical edges in slidable wiping contact with the interior surfaces of the side walls and having an additional bottom marginal edge spaced from the interior surface of the bottom wall, said thrust plate operable toward and from the end wall but always within the confines of said chamber and having an opening therein, a pin rigidly secured to said end wall at one end and having its opposite end passing through the opening in said thrust plate, and a coil spring surrounding said pin and bearing at one end against said thrust plate and at its opposite end against said end wall.

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