(No Model.)

E. A. PUMYEA.

FASTENER FOR THE MEETING RAILS OF SASHES.

No. 466,184. Patented Dec. 29, 1891.

Fig 1

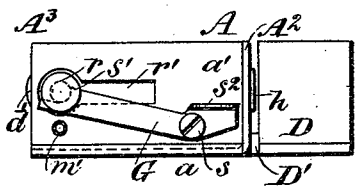


Fig 2

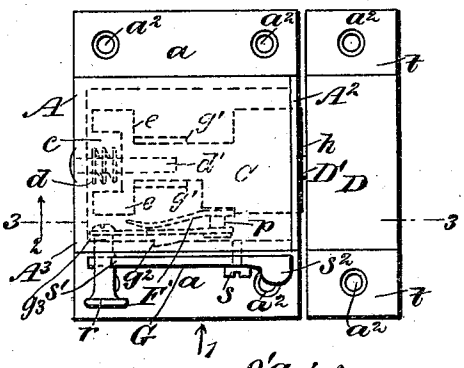
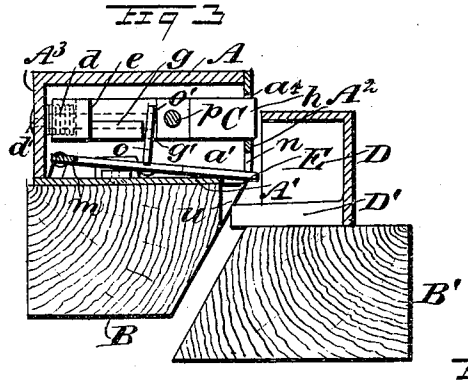


Fig 3



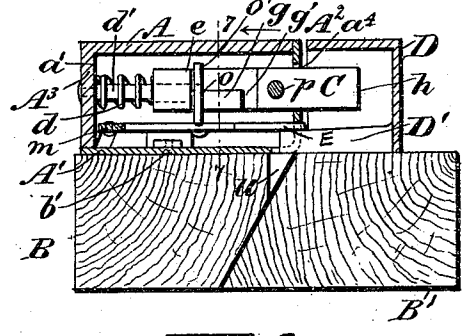


Fig 8

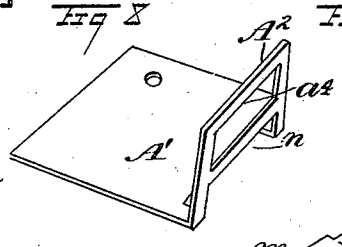


Fig 4

Fig 5

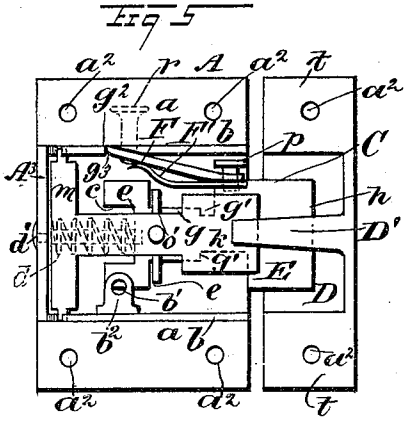


Fig 6

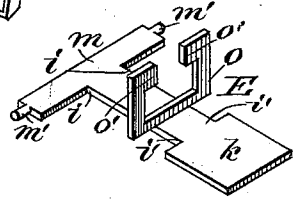
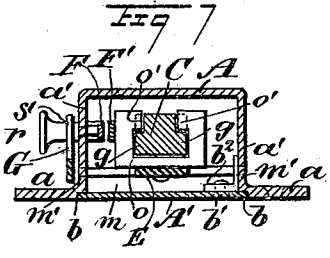


Fig 7



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FASTENER FOR THE MEETING-RAILS OF SASHES.

SPECIFICATION forming part of Letters Patent No. 466,184, dated December 29, 1891.

Application filed May 11, 1891. Serial No. 392,309. (No model.)

To all whom it may concern:

Be it known that I, EDWIN A. PUMYEA, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Sash-Fasteners, of which the following is a full, clear, and exact description.

The object of this invention is to produce a sash-fastener that will automatically lock the upper and lower sash together at their meeting-rails and retain them in a locked condition until released by a proper manipulation from the interior of the apartment that the window lights.

To this end my invention consists in the construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view opposite the arrow 1 in Fig. 2. Fig. 2 is a plan view of the device with interior parts shown by dotted lines. Fig. 3 is a sectional side view taken on the line 3 3 in Fig. 2, looking in the direction of the arrow 2 and showing parts in open condition. Fig. 4 is a similar view representing parts in locked adjustment. Fig. 5 is an inverted plan view of the device with the bottom plate removed. Fig. 6 is a perspective view of a locking trip-plate constituting an important feature of the invention. Fig. 7 is a transverse section of the device with parts removed, taken on the line 7 7 in Fig. 4, showing the case which contains the locking mechanism and principal parts of the latter in locked adjustment; and Fig. 8 is a perspective view of the bottom plate of the casing, which contains the working parts of the device.

The casing A of the sash-fastener is of a substantially rectangular form, cast or formed otherwise from metal, having its lower side and one end left open. Opposite flanges a extend from two sides, which flanges are perforated to receive screws for the attachment of the casing and contained parts upon the upper edge of the meeting-rail B of the lower sash. A bottom plate A′ is provided for the casing A, which is bent at a right angle, so as to close up the open end and lower side of the latter, there being rabbet grooves b formed in the flanges a, where they join the side walls a' of the casing, which receive the edges of the bottom plate and permit its lower surface to align with the lower sides of the flanges a, a means for removable attachment of the bottom plate upon the casing being afforded by a screw b', that passes through the plate A′ and enters a perforated and tapped ear b^2, which projects from the inner surface of one side wall of the casing, as shown in Fig. 7. A suitable slotted aperture a^4 is made in the end wall A^2, which is integral with the bottom plate A′, to allow the free outer end of the locking-bolt C to project through said aperture when the bolt is retracted, the opposite or inner end portion of the locking-bolt nearly touching the other end wall of the casing when the sash-fastener is in an unlocked condition, as shown in Figs. 2 and 3. There is a notch cut at c on the inner end of the locking-bolt C of sufficient depth and width to admit the coiled spring d and contain it when the bolt is slid to unlock it and the spring thereby compressed. A stud d' is projected from the inner side of the casing end wall A^3 and enters a longitudinal perforation in the bolt-body C. The spring d, encircling said stud, is thereon supported, and the inner end of the locking-bolt is also sustained by the stud, free to slide, when pressed by the spring, or manipulated in a manner and by means that will be described. From the point e on the bolt-body C it is laterally reduced in breadth an equal degree on each side edge, and also on the top side, to produce thinner flanges g, that terminate at g', where notches are formed, the end portion h of the bolt extending a suitable length forward of the notches mentioned to project from the casing and engage a keeper-plate D.

A trip-plate E is provided, which, as shown in Fig. 6, consists of a flat bar of proper width, that is reduced between the points i i', leaving a tripping-toe k on one end and a cross-bar m on the opposite end, the bar having trunnion ends m' on it, that engage slots formed at opposite points in the side walls of the casing A near the end wall A^3 and flanges a of the said casing, the end wall A^2 of the

bottom plate A′ having an opening *n* formed transversely in it parallel with the slot a^4 and between it and the bottom plate A′, which latter is partly cut away by slot *n*. (See Fig. 8.) Upon the upper surface of the trip-plate E, at such a distance from its trunnions *m′* as will permit a proper engagement of parts, there is a lifter-plate *o*, attached transversely, having two hooked limbs formed on its side edges oppositely, the toes *o′* of which will hook upon the flanges *g* of the bolt C, when a proper adjustment of parts is effected to retract the bolt within the casing A. Upon the bolt C an adjustable locking-dog F is laterally secured by a stud *p*, that projects from the side of the bolt between its outer end and one notch *g′* thereon, a plate-spring F′ being held by one end securely upon the bolt-body between the dog and spring by the stud, which latter loosely engages one end portion of the dog, so that the latter may rock and by the pressure of the spring be forced to engage the opposite ends g^3 with a shoulder g^2, produced on the inner surface of the side *a′* of the casing A at a proper distance from the end wall A^3, so as to prevent the retraction of the bolt by pressure on its outer end when in locked condition. There is a push-bar *r* formed on or secured to the locking-dog F on its side that is nearest one side wall of the casing A, which bar has a sliding engagement with a slot *r′* that is formed in this adjacent side wall, the main portion projecting from said wall exteriorly when the dog F is in locked contact therewith interiorly, as before explained.

When the bolt C is to be slid within the casing A, it is first necessary to release the end g^3 of the dog from locked contact with the shoulder g^2, which may be done by pushing the button-head—that is, the outer terminal of the push-bar *r*—and at the same time sliding the bolt by pressure rearward or toward the end wall A^3 of the casing, if the bolt is to be retained in an unlocked condition, the rearward adjustment of the bolt being secured detachably by a latch-piece G, which is pivoted at *s* on the side of the casing, (see Figs. 1 and 2,) and engages its free end *s′* with the push-bar *r*, if its end s^2 is depressed after the bolt C has been slid, as indicated in Fig. 2 by dotted lines. The keeper-plate D is in box form, open on the side that is seated upon the top surface of the inwardly-extended meeting-rail B′ of the upper sash of a window, whereon the casing A is secured, as before stated. As usual, the sash meeting-rails B B′ are inclined on their meeting faces, so as to effect a tight joint when the window is closed.

The keeper-plate D is provided with a tongue D′, that projects therefrom toward the meeting-rail B, when the parts are affixed on the sash oppositely, by screws inserted in the holes a^2, formed in the flanges *a* of the casing A and also in similar flanges *t* on the keeper-plate. The trip-plate E will by gravity fall into the position shown in Fig. 3 when the bolt C is slid within the casing A to release its outer end from the keeper-plate D, as the notches *g′* will then be located opposite the toes *o′* of the lifter-plate *o* on the trip-plate E, these toes sliding on the inwardly-moving flanges *g* of the bolt C when the latter is retracted to unlock the lower sash meeting-rail from the adjacent meeting-rail of the upper sash. As the depression of the tripping-toe *k* lowers the lifter-plate *o* when the bolt C is slid to unlock it, the toes *o′* will thus be caused to lie in the notches *g* of the bolt and retain it detachably retracted, this retraction being produced by a manipulation of the push-bar *r*, as before explained.

If the lower window-sash is in open adjustment the sash-fastener mechanism in the casing A will be adjusted as just stated and shown in Fig. 3. The depression of the sash so that its meeting-rail B approaches the sash meeting-rail B′ of the upper sash will cause the tongue D′ of the keeper-plate D to pass through a groove *u* in the edge of the lower meeting-rail and impinge upon the lower side of the trip-plate E, thereby rocking it upwardly so as to release the bolt C, which will be projected within the keeper-plate box and be secured by the dog F, as previously explained.

It will be evident that the manner of construction and assembling the parts of this device will afford a reliable sash-fastener at a comparatively low cost for production. Ease of manipulation and positive security against tampering with the mechanism from the exterior of the window being other advantages embodied in the improvement.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a casing and a keeper-plate having a projecting tongue, of a sliding bolt within the casing, a spring therefor, a rocking trip-plate that detachably engages notches on the bolt to hold it retracted, and a spring-actuated locking-dog on the bolt adapted to engage the casing when the bolt is in locked adjustment, substantially as described.

2. The combination, with a rectangular casing having lateral flanges perforated for screws and adapted for seating on the meeting-rail of a lower window-sash, and a laterally-flanged keeper-plate to be secured on the meeting-rail of an upper sash, of a slide-bolt within the casing, a guiding-stud that projects into a longitudinal hole in the bolt from the end wall of the casing, a spiral spring thereon, a locking-dog on the side of the bolt having a push-bar that projects through a slot in the side wall of the casing and is adapted to lock fast to or be released from the casing, a vibrating trip-plate, and a lifter-plate thereon having toes that slide on longitudinal flanges of the bolt or drop into terminal notches when the bolt is retracted, substantially as described.

3. The combination, with a rectangular cas-

ing and a rectangular keeper-plate in box form having a tongue adapted to project toward the casing when the parts are respectively secured on the meeting-rails of a lower and upper window-sash, of a slide-bolt supported to project into the keeper-plate, a guide-stud entering a longitudinal hole in the rear end of the bolt, a spiral spring on the stud, a spring-actuated locking-dog on the side of the bolt adapted to engage a shoulder on the inner face of the casing, a push-bar on the locking-dog projecting through a slot in the side wall of the casing, a rocking trip-bar below the slide-bolt and provided with a lifter-plate having toes adapted to loosely engage with longitudinal flanges of the bolt and to drop into terminal notches to hold the bolt retracted, and further provided with a tripping-toe on the outer end adapted to be impinged upon to release the slide-bolt when the lower sash is closed, and a latch-plate adapted to be interlocked with the push-bar of the locking-dog and retain the bolt in open adjustment, substantially as described.

EDWIN A. PUMYEA.

Witnesses:
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E. M. CLARK.