Oct. 21, 1924. 1,512,245

E. L. SLOAN

CLOSURE FASTENER

Filed Dec. 26, 1922

Fig. 1

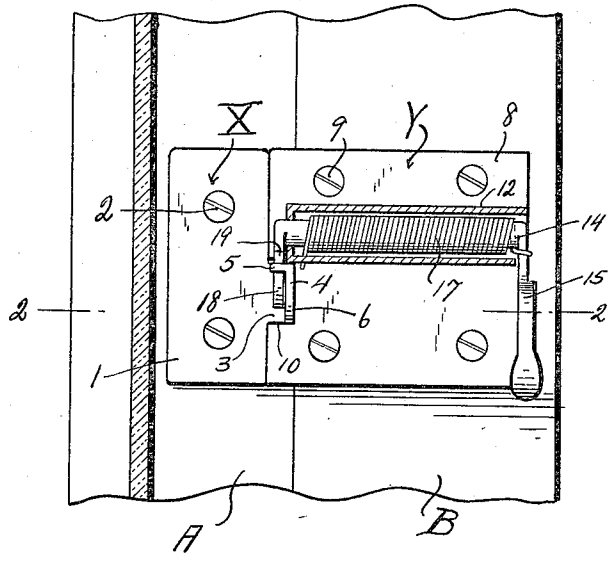


Fig. 2

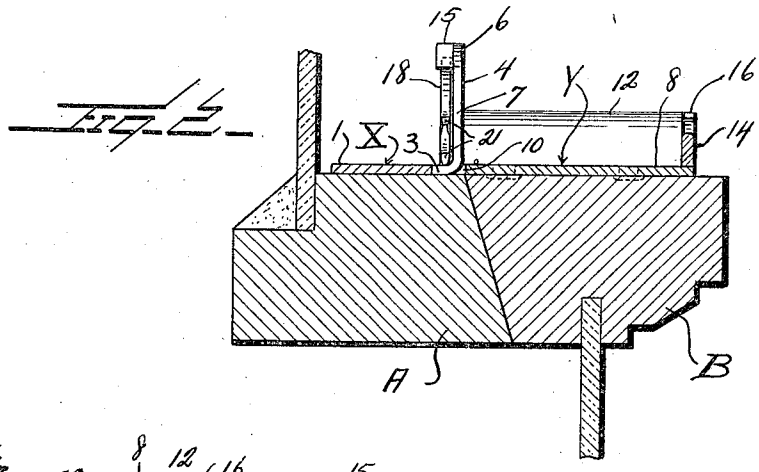
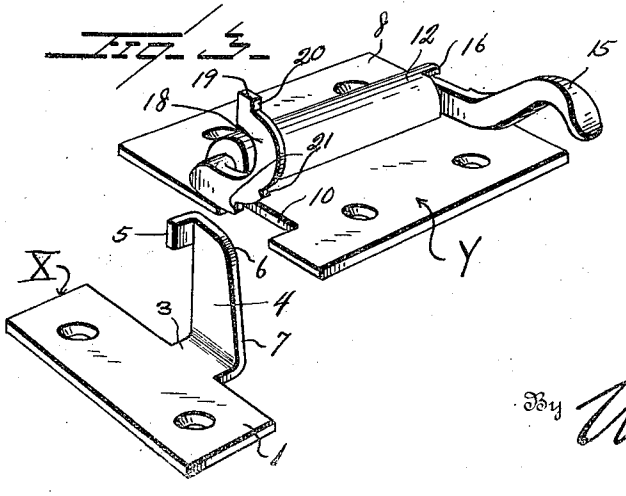


Fig. 3



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UNITED STATES PATENT OFFICE.

ELMER L. SLOAN, OF JOPLIN, MISSOURI.

CLOSURE FASTENER.

Application filed December 26, 1922. Serial No. 609,000.

To all whom it may concern:

Be it known that I, ELMER L. SLOAN, a citizen of the United States, residing at Joplin, in the county of Jasper and State of Missouri, have invented certain new and useful Improvements in Closure Fasteners, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in closure fasteners and has relation more particularly to a device of this general character especially designed and adapted for use in connection with the meeting rails of window sashes and it is an object of the invention to provide a device of this general character comprising two members one being adapted to be attached to one meeting rail and the second of said members being adapted to be attached to a second meeting rail together with a locking bolt carried by one of the members for engagement with the second member, said members being so arranged to prevent unlocking of the bolt from the outside.

It is also an object of the invention to provide a novel and improved device of this general character which, when in locked arrangement operates effectively to prevent rattling of the sashes.

Furthermore it is an object of the invention to provide a novel and improved closure fastener which when applied, permits free and unobstructed movement of the sashes and which provides for an automatic locking of the sashes in closed position either upon movement of the upper or lower sash.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved closure fastener whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:

Figure 1 is a fragmentary view illustrating a closure means constructed in accordance with an embodiment of my invention and in applied position;

Figure 2 is a sectional view taken substantially on the line 2—2 of Figure 1; and

Figure 3 is a view in perspective of both of the members comprised in my closure means and detached.

As disclosed in the accompanying drawings, A denotes the meeting rail of an upper sash and B the meeting rail of a lower sash, both being of a conventional construction and wherein the opposed faces of the meeting rails overlap when the under sashes are in closed position. Mounted upon the upper surface of the rail A is the member X which coacts with the member Y mounted upon the upper surface of the meeting rail of the sash B.

The member X comprises a plate 1 adapted to be secured in applied position by the screws 2 or the like, said plate having its outer marginal portion, when the plate is applied spaced inwardly of the outer marginal edge of the rail A. The marginal portion of the plate 1 at a point in relatively close proximity to an end of said plate is provided with a flat arm 3 continued by an upstanding arm 4. The upper extremity of the arm 4 at one side thereof is provided with an inwardly directed lug 5 while the opposite side portion of said arm 4 at its upper end is slightly rounded as at 6 with the adjacent vertical edge 7 disposed on a predetermined inward incline. The outer face of the arm 4, when the member X is in applied position is substantially flush with the adjacent outer edge of the rail A.

The member Y comprises a plate 8 secured to the upper surface of the rail B by the screws 9 or the like, said plate when applied, having its marginal portion extending beyond the outer edge of the rail B so that when the rails are in closed relation, said marginal portion of the plate 8 will partially overlap the rail A.

Said extended portion of the plate 8 is provided with a recess or notch 10 through which the arm 4 freely passes when either of the sashes is being moved into an open or closed position, the arm 3 seating within said recess or notch 10 when the meeting rails A and B are substantially in contact. The notch or recess 10 is of a length slightly in excess of the width of the arm 3 for a purpose to be hereinafter referred to.

The plate 8 to one side of the recess or notch 10 and immediately adjacent thereto is provided with an upstanding barrel or

housing 12 through which is disposed for rocking movement a bolt 14. The outer end of the bolt is provided with an operating handle or lever 15. The rotating movement of the bolt 14 in one direction being limited by contact of said handle or lever 15 with the shoulder 16 provided at the adjacent end of the barrel or housing 12. The rotation of the bolt 14 in the opposite direction is limited by contact of the handle or lever 15 with the plate 8 and said bolt is constantly urged in said last named direction through the instrumentality of the spring 17 mounted within the barrel or housing 12 and encircling the bolt 14. One end portion of the spring 17 is engaged with the handle or lever 15 while the opposite end portion of said spring 17 as herein disclosed, has contact with the plate 8 and extends outwardly beyond the adjacent wall of the barrel or housing 12 as is clearly illustrated in Figures 1 and 2 of the accompanying drawings.

The inner end of the bolt 14 has fixed thereto an arcuate arm 18 substantially semi-circular in form, said arm being herein disclosed as positioned to one side of the bolt 14 and partially overlying the notch or recess 10 of the plate 8 when the bolt 14 is at the limit of its movement under the influence of the spring 17. When in this position the arm 18 is disposed upwardly or away from the plate 8. This arm 18 is also positioned inwardly of the adjacent end of the plate 8. The outer or free end portion of the arm 18 is provided with a substantially radially directed groove 19 which provides a stop shoulder 20. The outer or outbowed edge of the arm 18 is also herein disclosed as provided with a plurality of spaced shoulders 21.

As the meeting rails A and B are brought together the bolt 14 will pass through the recess or notch 10 and the lug 5 will contact with the arm 18 and swing the same upwardly and rearwardly until the lug 5 passes above the center of the arm 18 whereupon the spring 17 will cause the arm 18 to swing in the opposite direction, until under normal conditions, the stop shoulder 20 is brought substantially into contact with the lug 5. In this position the meeting rails A and B are effectively locked against separating movement.

The coaction between the arms 4 and 18 as the rails A and B are brought into closed relation also results in the lower rail B being slightly moved in one direction and the upper rail A being slightly moved in the opposite direction whereby the window sashes are effectively maintained against rattling. This desired movement is permitted by having the notch or recess 10 of a length slightly in excess of the width of the arm 3 as hereinbefore described.

The shoulders 21 when engaged with the lug 5 permit the rails A and B to be effectively locked when said rails are slightly separated as may be desired and said shoulders also assure the desired locking of the rails A and B in the event the rails A and B should be forced apart when the lug 5 is positioned adjacent to the shoulder 20. The shoulders 21 also assure the requisite locking action in the event obstruction should be offered to bringing the rails A and B completely into closing relation.

While I have hereinbefore particularly described my closure fastener as in connection with the meeting rails of window sashes it is to be understood that the same can be employed with equal efficiency in connection with refrigerator doors, automobile doors, street car doors and the like.

It is also to be understood that in the event the spring 17 should break or otherwise become ineffective, the locking action will be readily accomplished by the requisite rotation of the bolt 14 by gravity of the handle or lever 15.

From the foregoing description it is thought to be obvious that a closure fastener constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

1. A window fastener comprising a member mounted upon one meeting rail of the sashes and including a base portion and an upstanding portion having a lateral lug thereon, and a member carried by the other meeting rail and formed as an attaching plate extending outwardly beyond the edge of the second named meeting rail in slightly overlapping relation to the first meeting rail, said projecting portion being formed with a notch for the accommodation of the upstanding portion of said first named member, a bolt rockably mounted through a bearing on said second named member and equipped at one end with an operating handle having limited movement, and an arcuate arm on the other end of said bolt engageable with said first named member against the side of the upstanding portion furthest from the second named meeting rail and beneath said lug, said arcuate arm terminating in a lug adapted to abuttingly engage said first named lug and being formed at other points with stop shoulders adapted to be engaged against the first

named lug in the event that the sashes cannot be forced to fully closed position.

2. A window fastener comprising a member mounted upon one meeting rail of the sashes and including a base portion and an upstanding portion having a lateral lug thereon, and a member carried by the other meeting rail and formed as an attaching plate extending outwardly beyond the edge of the second named meeting rail in slightly overlapping relation to the first meeting rail, said projecting portion being formed with a notch for the accommodation of the upstanding portion of said first named member, a bolt rockably mounted through a bearing on said second named member and equipped at one end with an operating handle having limited movement, and an arcuate arm on the other end of said bolt engageable with said first named member against the side of the upstanding portion furthest from the second named meeting rail and beneath said lug, the engagement of the arcuate arm with the far side of the upstanding portion operating to draw said meeting rails together into close engagement whereby to prevent rattling.

In testimony whereof I hereunto affix my signature.

ELMER L. SLOAN.