T. MADSON.

SASH FASTENER.

APPLICATION FILED MAY 1, 1920.

1,359,409.

Patented Nov. 16, 1920.

Fig. 1.

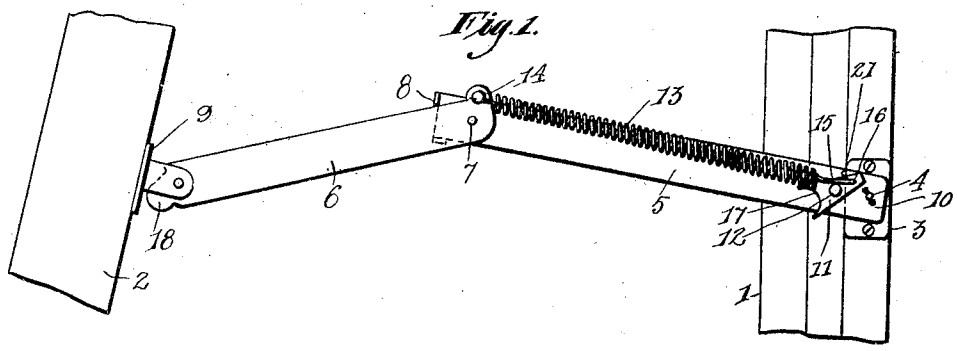


Fig. 2.

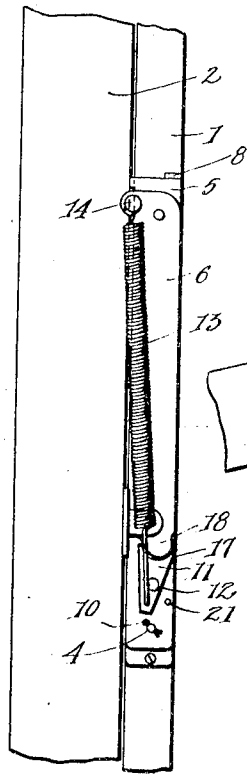


Fig. 4.

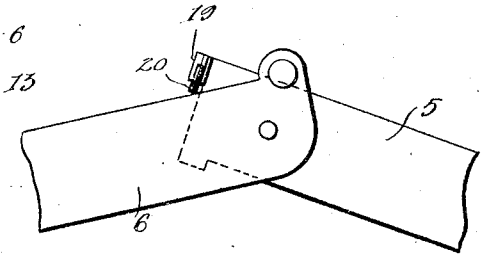


Fig. 5.

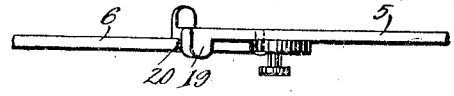
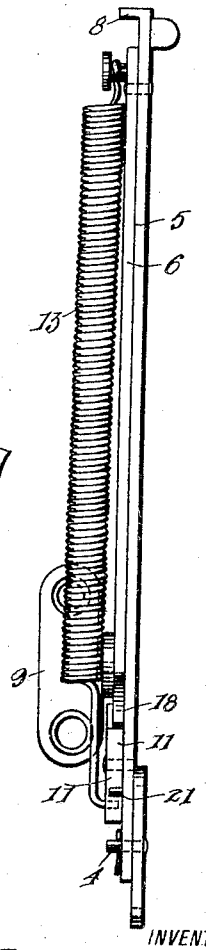


Fig. 3.



WITNESSES

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SASH-FASTENER.

1,359,409. Specification of Letters Patent. Patented Nov. 16, 1920.

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To all whom it may concern:

Be it known that I, THEODORE MADSON, a citizen of the United States, and a resident of Ulen, in the county of Clay and State of Minnesota, have invented a new and Improved Sash-Fastener, of which the following is a full, clear, and exact description.

This invention relates to improvements in sash fasteners, and more particularly to devices which function both as fasteners to hold a sash in closed position and also function to hold a sash in open position.

A further object is to provide improvements of the character stated which are especially adapted for use in connection with storm sashes, but which may, of course, be used in connection with shutters, box covers, and other similar devices in which it is desirable to securely hold the movable member in its closed or open position.

With these and other objects in view the invention consists in certain novel features of construction, and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Figure 1 is a view in elevation illustrating my improved device in position to hold a storm sash extended or open.

Fig. 2 is a view showing the parts in position when the sash is closed.

Fig. 3 is an enlarged view in elevation or edge view of the device detached.

Fig. 4 is a fragmentary view illustrating a modification.

Fig. 5 is a top plan view of Fig. 4.

1 represents a window frame and 2 a storm sash. The storm sashes in general use are ordinarily hinged at their upper ends and their lower ends are moved outwardly to open the sash and drawn inwardly against the frame to close the sash, and it is the purpose of my invention to provide improved means for securely holding the sash or other analogous device in the positions as above indicated.

While I ordinarily provide my improved devices in pairs connected at both sides of the frame sash, in some cases a single device may suffice, and I have illustrated in the drawings but a single device, but would have it understood that the invention is not limited to any particular number of such devices which may be employed.

A plate 3 is secured to the window frame 1 and made with a stud or pivot pin 4 projecting therefrom and on this stud 4 one member 5 of my improved sash fastener is pivotally supported.

The sash fastener embodies in the main two members 5 and 6 which constitute relatively flat bars pivotally connected by a rivet or other pivotal device 7 so that the members 5 and 6 form in effect an elbow, and a laterally projecting lug 8 on the free end of member 5 is adapted to engage the edge of the member 6 and limit the pivotal movement of the members in one direction, as clearly shown in Fig. 1. The member 6 adjacent its outer end is pivotally connected to a bracket 9 and the latter is secured to the sash 2. A cotter pin 10 may be projected through the stud 4 to hold the member 5 pivotally mounted thereon, but it is obvious that this particular form of securing means can be varied without departing from the invention.

A triangularly shaped holding plate 11 is pivotally supported at its approximate center by means of a rivet or other pivotal device 12 which is secured to the member 5. A coiled spring 13 is connected at one end to a pin 14 on the member 6 and at its other end to the holding plate 11 below the center of the latter, and said spring may be provided with a hooked end 15 which engages in an opening 16 in the plate 11 to constitute the connecting means between the spring and the plate. One end, which constitutes the normal upper end of the plate 11, is made with a curved recess 17 adapted to receive therein a curved or rounded lug 18 on the end of member 6 adjacent the bracket 9.

In the modification illustrated in Figs. 4 and 5, I provide adjusting means for regulating the pivotal movement of the members 5 and 6, and this adjusting means consists of an internally threaded tubular enlargement 19 on one end of member 5 to receive a screw 20 which can be adjusted in said enlargement and which operates to engage the edge of member 6 and limit the pivotal movement. A stop pin 21 is fixed to member 5 and limits the pivotal movement of plate 11 in one direction.

The operation is as follows: Fig. 1 illustrates the position of my improved device with the sash 2 in its open or extended position, and it will be noted that when the parts are in this position, the spring 13 exerts a pull on the plate 11 to hold the same

against the stop pin 21 so that the line of pull of the spring is to one side of the pivotal connection 12. The lug 8 engaging member 6 limits the pivotal movement of the members relative to each other so that the parts are shown in one extreme position.

When the sash 2 is closed, the members 5 and 6 hinge or pivot on the rivet 7 and the member 6 moves to the position shown in Fig. 2. During this movement the curved or rounded lug 18 on the end of member 6 engages in the curved recess 17 of plate 11 and forces the plate 11 to turn on its pivot 12, thus forcing the connection between the spring 13 and the plate 11 to the opposite side of the pivotal center 12. The tension of the spring will then be utilized to hold the sash in closed position, making it necessary to exert considerable force or pressure on the lower end of the sash to force it outwardly, and after this movement is begun, the tension of the spring 13 is utilized to assist this outward or opening movement of the sash.

While I have illustrated my improved device as connected to the side of a sash, it is obvious that by slight modification, it might be connected to any portion of the sash and I do not limit myself to any particular sash and frame attaching means as this will be modified in accordance with the arrangement of the sash holding device or devices.

Various slight changes might be made in the general form and arrangement of parts described without departing from the invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. A device of the character stated, comprising two members pivotally connected, means limiting the pivotal movement of said members in one direction relative to each other, a pivotally supported plate on one member, a spring connecting said plate with the other member, and said plate adapted to be engaged by the last-mentioned member and shifted from one pivotal position to another.

2. A device of the character described, comprising two members pivotally connected, means pivotally connecting one of said members to a frame, means pivotally connecting the other of said members to a movable part, a spring connecting said members, and a pivotally supported plate on one member operatively connected to the spring and adapted to shift the position of the spring, whereby the latter functions to hold the members in either their extended or their closed positions.

3. A device of the character described, comprising two members pivotally connected, a plate pivotally connected to one member and having a recess in its end, a lug on the other member adapted to engage in the recess of the plate and shift the same from one pivotal position to another, and a spring connecting the last-mentioned member with the plate.

4. A device of the character stated, comprising two members pivotally connected, a stop on one member engaging the other member and limiting the pivotal movement of the members in one direction, a bracket pivotally connecting one member with a frame, another bracket pivotally connecting the other member with a movable part, a lug on the last-mentioned member, a plate on the other member, a spring connecting the members, and said plate adapted to be engaged by the lug to shift the position of the spring, whereby the spring operates to hold the members in either their extended or closed positions.

THEODORE MADSON.