

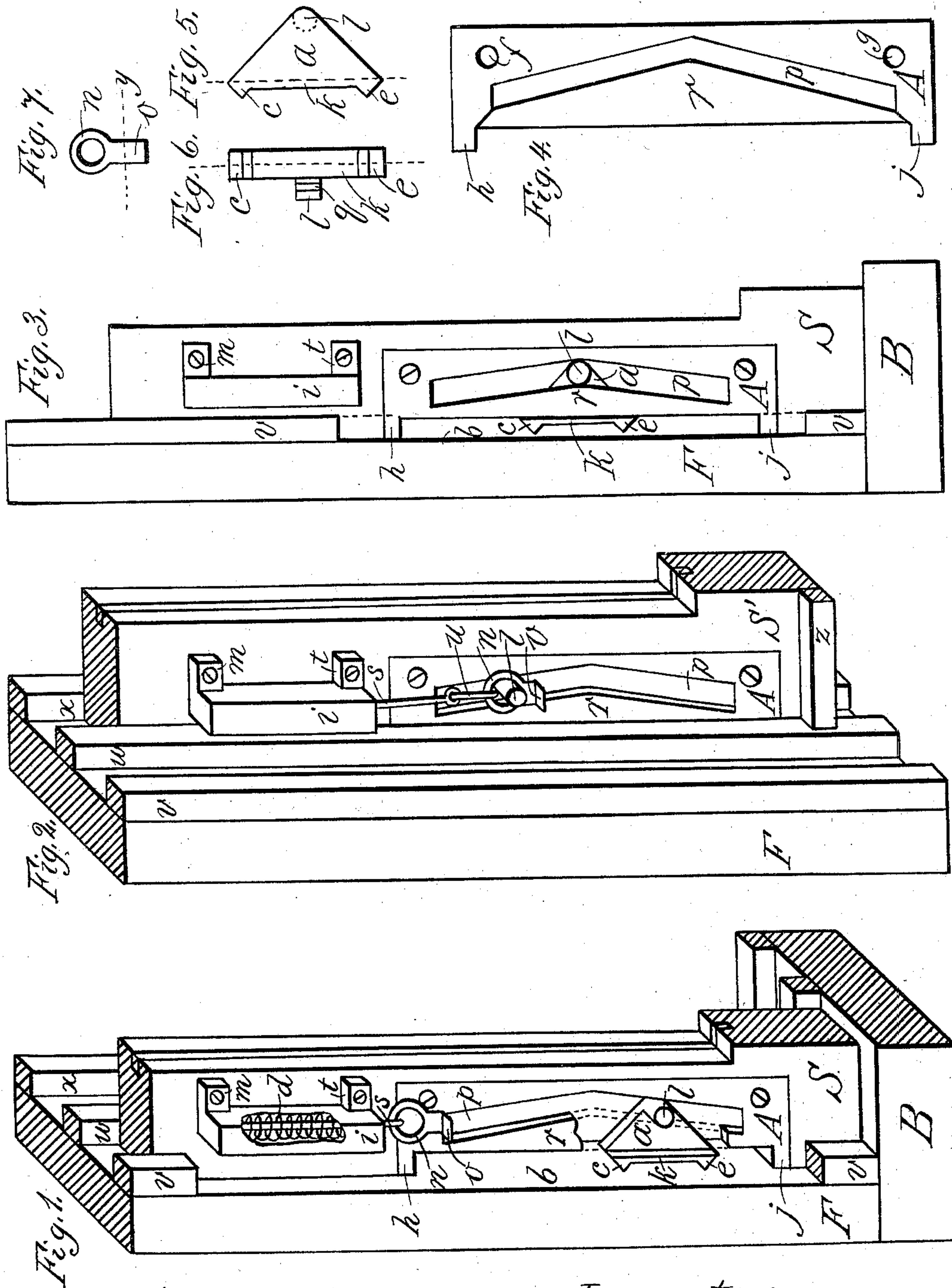
(No Model.)

W. ZAEHRINGER.

SASH FASTENER.

No. 598,756.

Patented Feb. 8, 1898.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

WILLIAM ZAEHRINGER, OF NEW ORLEANS, LOUISIANA.

## SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 598,756, dated February 8, 1898.

Application filed October 30, 1895. Serial No. 567,389. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM ZAEHRINGER, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Improvement in Automatic Sash Locks and Holders; and I do hereby declare that the following is a full, clear, and correct description of the same, reference being had to the annexed drawings, forming part of this specification.

The invention consists of a certain peculiar construction fully described, and set forth in the claim.

The objects of my invention are, first, to provide an automatic locking device which may optionally be mortised into the frame of a sash; second, an automatic locking device to enable a person to raise or lower the sash to any desirable height with the employment of only one hand. These objects are attained by the simple device illustrated in the accompanying drawings, of which—

Figure 1 is a sectional view of the lower left-hand side of a frame and inner sash with all the parts of the invention attached; Fig. 2, a section of the left-hand side of the frame and outer sash; Fig. 3, an elevated plan of the lower left-hand side of the frame, inner sash, spring-casing, and the locking device; Fig. 4, an enlarged elevated plan of the back of a slotted plate of metal; Fig. 5, an enlarged plan of the back of a triangular knobbed, flanged, and spur-clad stopper; Fig. 6, a left-hand end view of Fig. 5, and Fig. 7 a plan of a metallic suspension-ring with projecting finger-piece.

In Fig. 1 the inner sash S is represented as being locked and it cannot, when in this position, be raised from the outside, and from the inside only when manipulated as follows: First, disengage the triangular stopper *a* from the side *b* of the frame F, and the now impacting right-hand lower angle of the slot *p* in the plate A. This is accomplished by catching the knob *l* and pushing it with its integral stopper *a* upward with the thumb and finger until the spurs *c* and *e* are freed from the side *b* of the frame F. Thence push the stopper *a* farther upward into the upper angle of the slot *p* as far as it will go. When becoming jammed against the wall *b* let it go,

and pull down the spring-lifted ring *n*, placing it around the neck of the knob *l*, when the sash S may be raised to any height desired. Having reached an optional height, let go of the sash S, when it will practically remain at that height by reason of the spurs *c* and *e* of the stopper *a* being forced slightly into the side *b* of the frame F, due to the gravity of the sash S, producing a left-hand lateral pressure upon the base of the knob *l* and nose of the stopper *a* through the direct impact of the right-hand side of the upper angle of the slot *p* in the plate A. (See Fig. 2.) Hence it is seen that the weight of the sash S' is instrumental in forcing the spurs *c* and *e* (see Fig. 3) into the side *b* of the frame F, thus effectually preventing its fall in the frame. To again lower the sash S (see Fig. 1) down to the sill B, so as to automatically lock the same, I will refer to Fig. 2, which represents the outer sash now held up in the frame. First, remove the ring *n* from the knob and then raise the sash slightly upward, when the spurs *c* and *e* on the stopper *a* will be freed from their impact against the side of the wall *b* by reason of the upper left-hand angle of the slot *p* in the plate A pushing outward against the base of the knob *l* of the stopper *a*, causing it by its gravity to fall down into the lower angle of the slot *p* in the plate A, when the sash should be lowered to the sill B, at which point it will be instantly and automatically locked, as shown in Fig. 1.

From the foregoing description it will be seen that when the outer sash S' is raised in the frame F to its maximum height and the locking device is arranged as shown in Fig. 2 the sash cannot be pulled down from the outside. When the inner sash S is lowered in the frame F down to the sill B and the locking device is arranged as shown in Fig. 1, the sash cannot be raised up from the outside. Hence my invention serves to lock the respective upper and lower sashes independent from each other, and either one or both can be adjusted to any desired height in the frame from the inside of a room.

Fig. 3 shows the plan of the plate A mortised into the left-hand lower side of the sash S, being flush with its surface and securely held by two screws. The stopper *a* is shown



to be stationed midway between the two angles of the slot  $p$ , and its spurs  $c$  and  $e$  are now necessarily freed from the side  $b$  of the frame  $F$ , owing to the flange  $r$  on the left-hand side of the slot  $p$  being made wide enough for this purpose, thus admitting of its free passage from the upper to the lower angle of the slot, or vice versa.

The casing  $i$  is to be made wide and long enough to snugly admit a thin and slender open spiral spring of such width and length as will be found practical for the proportionate length of the upper angle of the slot  $p$ . The casing  $i$  has three vertical sides and a hole in the lower one of its closed ends, with right-angled projections  $m$  and  $t$  for firmly securing the same to the sash with screws. The spring  $d$  (see Fig. 1) within the casing  $i$  is pulled downward when in use by a centrally-projecting slender vertical rod  $s$ , having a cap or collar at its upper end and an eyelet at its lower extremity for the reception of the link  $u$  (see Fig. 2) and the ring  $n$ . The ring  $n$  has a finger-piece  $v$ , (see Fig. 7,) which is bent outward at  $y$  about a right angle to the face of the ring, enabling it to be easily drawn downward with the tip of the finger and then placed around the neck of the knob  $l$  on the previously-raised stopper  $a$  preparatory to raising the sash. The plate  $A$  and the casing  $i$  (see Fig. 3) may be cast in one piece, if preferred.

Fig. 4 is an enlarged plan view of the back of the plate  $A$ , with the slot  $p$  and the screw-holes  $f$  and  $g$  cast or cut into the same. The entire plate, excepting the flange part  $r$ , has a uniform thickness of such dimensions as to allow the flat body of the stopper  $a$  to freely pass up and down under the flange  $r$  when the plate  $A$  is firmly screwed into the mortise of the sash, as shown in Fig. 3.

Fig. 5 represents an enlarged plan view of the back of the stopper  $a$ , its shape being triangular. The left-hand side has a flange  $k$ , containing two integral spurs  $c$  and  $e$ . At the point of the right-hand side it is furnished with an integral knob  $l$ . The knob  $l$  (see Fig. 6) has a shallow groove cut around its circumference at  $q$  to properly receive and prevent the ring  $n$  from slipping off when in use. The thickness of the flat surface of the stopper  $a$  must be such as to admit of its freely playing up and down in the inclosed space formed by the wall (in the mortise) of the sash  $S$  and the flange  $r$  of the plate  $A$ . (See Fig. 3.)

I prefer to use two integral spurs  $c$  and  $e$  on the flange  $k$  of the stopper  $a$ ; but this number may be decreased or increased at will and shaped differently.

I prefer to use an open spiral spring protected by a casing; but a closed spiral spring or equivalent with or without a casing may be substituted at will.

It will be obvious that all the features of my invention will admit of their being ad-

justed to the right-hand side of a sash as well as to the left-hand side, requiring no change in their respective forms.

If desired, the plate  $A$  can be adjusted to a sash without mortising or countersinking. In such a case the spurs  $c$  and  $e$  will necessarily impact against the right-hand side of the vertical molding-strip  $v$ , (see Fig. 3,) instead of against the side  $b$  of the frame  $F$ , and the casing  $i$  would have to be placed more to the right-hand side of its present position to conform to the changed position of the plate  $A$  and its accessories.

To properly attach the plate  $A$  (see Fig. 4) to the left-hand side of a sash without mortising, first push the sash  $S$  toward the left-hand side of the frame  $F$  as far as it will go. Then place the plate  $A$  vertically against the molding-strip  $v$ , allowing the lugs  $h$  and  $j$  to touch the side of the molding-strip  $v$ . Then mark on the sash-surface with a pencil the place for the screw-holes, through the screw-holes  $f$  and  $g$ . When firmly secured in this position, the plate  $A$  and its accessories will produce the objects desired.

The plate  $A$  can be cast with its back partially hollowed out, where thickness and strength are not absolute requisites. The sides of the slot  $p$  in the plate  $A$  must be filed smooth to permit the free sliding across the base of the knob  $l$  and the nose of the stopper  $a$ . The latter must also be filed smooth for the same purpose.

The knob  $l$  on the stopper  $a$ , Fig. 2, does not project outward horizontally beyond the strip of molding  $z$  on the outer sash  $S'$ , so as to enable the respective sashes to pass each other upward and downward without interference by contact with the knob  $l$ .

The ring  $n$  and its integral finger-piece  $v$ , Fig. 7, may be made of sheet metal, or preferably out of an ordinary slender ring of metal that will admit of being easily bent into the required shape.

It will be apparent that the sash  $S'$ , Fig. 2, being held up in the frame  $F$  by its own gravity, its right-hand side is compelled to firmly abut against that side of the frame, hence materially if not entirely preventing its vibratory movements, caused by the wind, and the consequent disagreeable rattling noise.

Obviously the various simple parts of my invention can be made in various forms, sizes, and ornamental shapes without differing from its principles of construction and operation.

I am aware that different kinds of wedges for holding and locking sashes have been used before. I am also aware that a plate or casing with an angular slot made to receive a knob attached to the sash wedge or stopper is not new. Hence I do not claim these parts, broadly; but

What I do claim as new and useful, and desire to secure by Letters Patent, is—

In an automatic sash lock and holder the



suspension-ring *n*, with an integral finger-  
piece *v*, attached to a rod *s*, operated by a  
spring *d*, within a casing *i*, in combination  
with a fixed plate or casing *A*, having a dif-  
5 ferential angled slot *p*, flange *r*, and lugs *h*  
and *j*, in connection with a triangular wedge  
or stopper *a*, having an integral knob *l*, in-  
tegral flange *k*, and integral spurs *c* and *e*,

substantially as, and for the purposes de-  
scribed.

In testimony whereof I have hereunto signed  
my name.

WM. ZAEHRINGER.

Witnesses:

ARTHUR COSTE,  
LOUIS ABRAMS.