No. 801,041. PATENTED OCT. 3, 1905.

G. A. ORR.

SASH FASTENER.

APPLICATION FILED MAR. 1, 1905.

2 SHEETS—SHEET 1.

Fig. 1

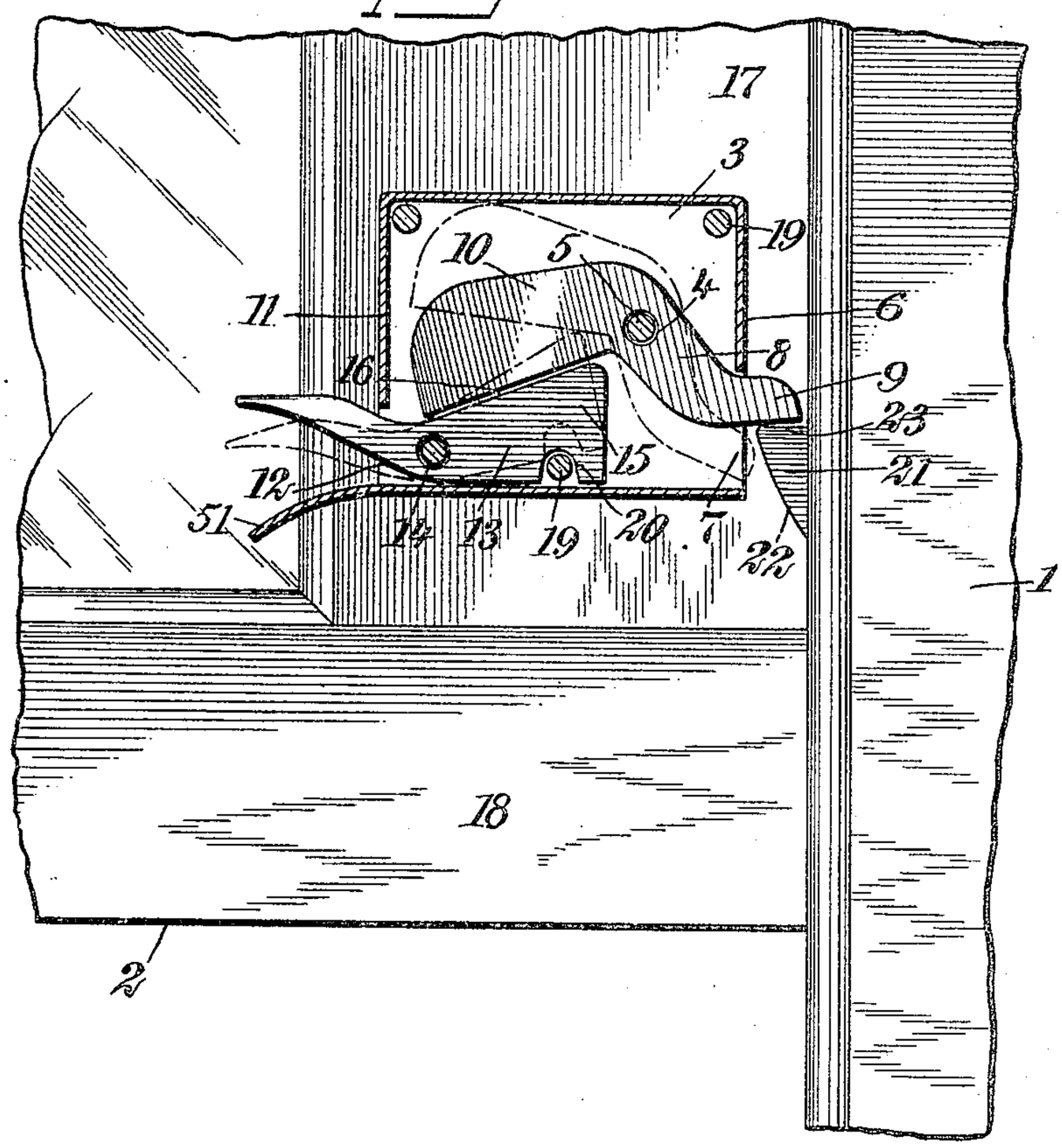

Fig. 2

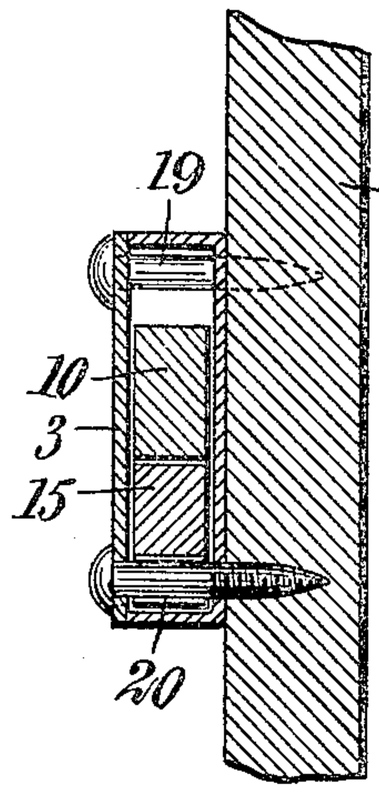

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Fig. 3

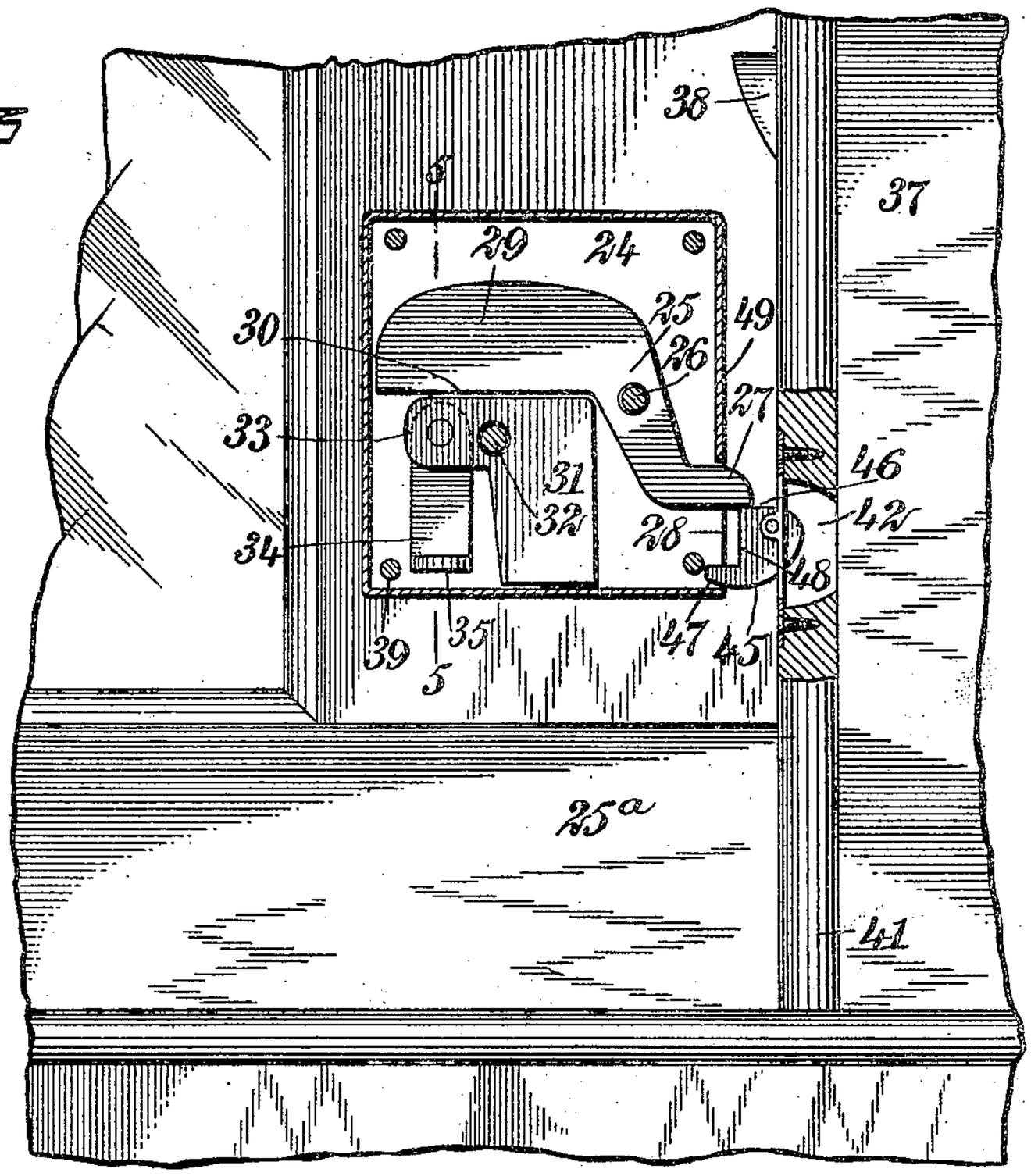

Fig. 4

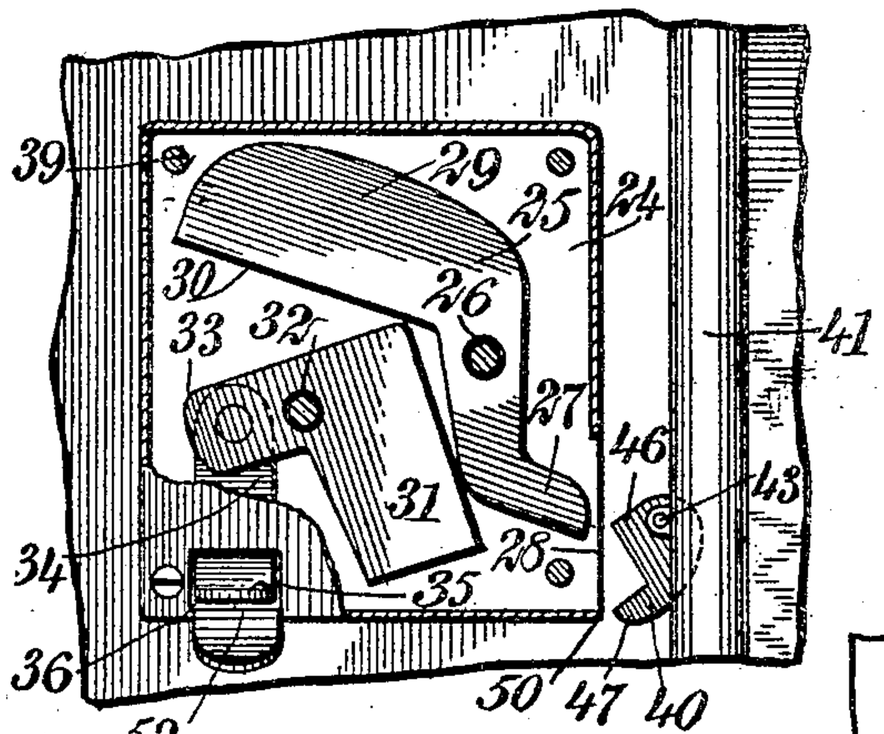

Fig. 5

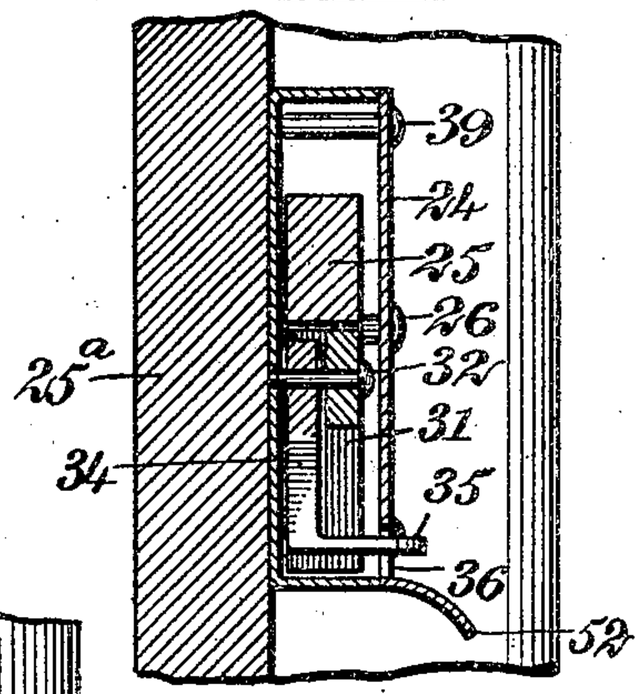

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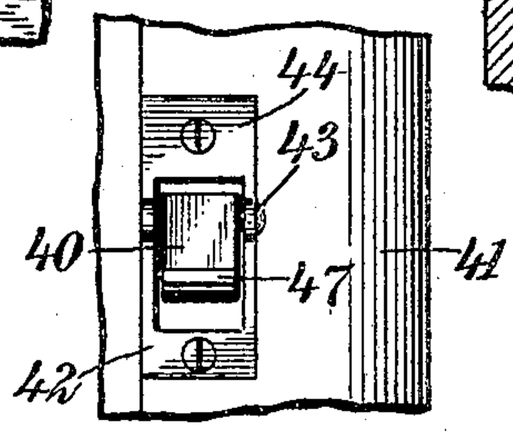
Fig. 6



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UNITED STATES PATENT OFFICE.

GAYLORD A. ORR, OF CRIPPLECREEK, COLORADO.

SASH-FASTENER.

No. 801,041. Specification of Letters Patent. Patented Oct. 3, 1905.

Application filed March 1, 1905. Serial No. 247,947.

To all whom it may concern:

Be it known that I, GAYLORD A. ORR, a citizen of the United States, and a resident of Cripplecreek, in the county of Teller and State of Colorado, have invented a new and Improved Sash-Fastener, of which the following is a full, clear, and exact description.

This invention relates to sash-fasteners, and especially to that class adapted to be used in connection with sliding sashes which may be raised or lowered in the sash-frame.

The object of the invention is to simplify the construction of such fasteners and to provide a mechanism which may be operated in a simple manner so as to hold the sash in an elevated or open position or in a locked condition when closed.

A further object has been to dispense with the use of springs and similar parts likely to get out of order.

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

Figure 1 is a side elevation showing a corner of a sash to which my sash-fastener has been applied, the said sash-fastener being shown in section. In this view also a portion of the sash-frame is shown, illustrating the manner in which the sash is supported therefrom, the sash being represented in an open or raised position. Fig. 2 is a vertical section taken substantially centrally through the sash-fastener and showing a portion of the sash also in section. Fig. 3 is a view substantially similar to Fig. 1, except that it represents the sash as in a closed and locked condition. Furthermore, in this view the inner construction of the fastener is somewhat different from that illustrated in Fig. 1. A portion of the sash-frame is shown in section. Fig. 4 is a side elevation showing a portion of the parts shown in Fig. 3, but showing the mechanism of the fastener and lock in a new relation, the fastener being shown broken away and partly in section, as will appear. Fig. 5 is a vertical section taken substantially upon the line 5 5 of Fig. 3, and Fig. 6 is an elevation of a portion of the sash frame or casing and showing a face view of the lock used in connection with my fastener.

Referring more particularly to the parts, and especially to Figs. 1 and 2, 1 represents the side of a sash-frame in which a sash 2 is placed to slide vertically. The sash 2 is represented in a raised position. In applying my invention to such a sash I provide a casing 3 of the box-like form usually found in the construction of locks or fasteners. Within the interior of this casing is a catch 4, pivotally mounted upon a transverse bolt or pin 5. This pin 5 is preferably disposed near the edge 6 of the casing, which edge preferably lies substantially parallel with the edge of the sash-frame 1, and the wall of the casing at this point is provided near its lower portion with an opening 7. The body 8 of the catch 4 preferably inclines downwardly from the pivot-bolt 5 and is formed at its extremity with an outwardly-bent toe 9, which protrudes through the aforesaid opening 7 and projects into the space near the edge of the sash-frame. The catch is provided beyond the pivot-bolt 5 with an enlarged tail or lobe 10, which constitutes a counterweight and tends to maintain the toe 9 in an elevated position, such as that shown in Fig. 1. At the rear edge 11 of the casing 3 the wall thereof is provided with an opening 12, preferably near its lower portion, and through this opening projects a lever 13, the same being pivotally mounted upon a bolt 14 within the casing, as will be readily understood. Within the casing beyond the pivot-bolt 14 the body of this lever is enlarged, so as to form a shoe 15, presenting an inclined upper edge 16. Against this edge rests the lower edge of the aforesaid tail or counterweight 10, and the edge of the counterweight is correspondingly inclined, so that the edges of these two pieces abut each other closely, as shown in Fig. 1.

The fastening device is preferably attached to the rail 17 of the sash near the lower rail 18. It is secured in position by bolts 19, two being arranged above at opposite corners of the casing, as shown, and one below at substantially the central line of the casing. In order to accommodate the lever 13 to this position of the lowermost bolt or screw, the lower edge of the shoe 15 is provided with a recess 20, which lies around the body of the lower bolt when the movable parts of the fastener occupy their normal positions.

In order to enable the fastener to support the sash in different positions in the frame, the side of the frame will be provided at suitable points with fixed buttons or rests 21, the same being of common form and presenting inclined lower faces 22 and substantially horizontal upper faces or shoulders 23.

From the construction described above it

should now be apparent that if the sash is raised when the toe 9 of the catch strikes against one of the inclined faces 22 the toe will be forced downwardly, so as to make the catch occupy substantially the position in which it is indicated in dotted outline in Fig. 1. Thus the toe of the catch would move back into the opening 7, so as to allow it to pass into the space above the rest 21. As soon as it had passed, by reason of the counterweight 10, it would immediately assume its normal position and project into the space above the shoulder 23, supporting the sash in its elevated position, as will be readily understood. It should be observed that this operation of the catch is independent of any movement of the lever 13 and takes place without the lever 13 being touched by the person raising the window. When, however, it is desired to lower the sash the projecting extremity of the lever 13 may be depressed by one's finger, so as to elevate the shoe 15. The elevation of the shoe in this manner will operate, of course, to throw the toe 9 backwardly, so as to allow the same to pass the rest 21.

The construction shown in Figs. 3 to 6 may be adopted. In Fig. 3 the casing 24 is represented as attached to a sash 25^a in substantially the same position as before. The form of the casing 24 is substantially the same as the form shown in Fig. 1, the only difference being with respect to the arrangement of the openings and the arrangement of the bolts for attaching the casing. Also, the mechanism within the casing is slightly altered in construction. A catch 25 is mounted upon a pivot-bolt 26 substantially as before and it is formed with a projecting toe 27, which normally protrudes through an opening 28 in the forward edge of the casing. The rear portion of the catch 25 is enlarged as before to form a counterpoise 29, and the lower edge 30 of the said counterpoise is when at rest horizontal, as shown in Fig. 3. Just beneath the edge 30 a block 31 is mounted upon a pivot-bolt 32, said block having a substantially horizontal upper edge upon which the aforesaid edge 30 normally rests. In Fig. 3 the parts are shown in their normal relation. The body of the block 31 is of substantially rectangular form, as shown, and its lower edge normally rests against the bottom wall of the casing 24. Beyond the pivot-bolt 32 the block is formed with a projecting ear 33, to which ear a link 34 attaches pivotally. As shown, this link depends in the space beneath the ear 33, and its lower extremity is bent outwardly, as illustrated most clearly in Fig. 5, so as to present a lip 35, adapted to be depressed by one's finger to operate the catch. The outer face or wall of the casing 24 is provided with an opening 36, through which this lip 35 projects. As shown in Fig. 4, the width of the lip 35 is substantially the same as the width of the opening 36, and said opening is of substantially rectangular form, from which arrangement the side edges of the opening operate as guides for the lower portion of the link. At the side of the window-frame 37 buttons may be provided similar to the buttons described in connection with the other form of device, one of said buttons being represented at 38 in Fig. 3. These buttons operate to support the sash at any desired height, and their construction is such that they will operate in connection with the catch 25, so as to allow the catch to pass when the sash is being raised. The mode of operation hence is substantially the same as that described in connection with the form first illustrated.

When it is desired to withdraw the toe 27, so as to enable the sash to be lowered, this would be accomplished by pressing down the lip 35. This operation effects a rotary displacement of the block 31, the upper edge of which then raises the counterpoise 29 of the catch, as illustrated in Fig. 4, and this throws the toe 27 into the casing, as will be readily understood. In practice the rounded toe 47 would be curved on its under side in an arc struck from the pivot-pin as a center, and the clearance would be sufficient at the edge 50 to permit the movement indicated. With this form of device I prefer to use four fastening-bolts 39, disposed at the corners of the casing, as shown.

I provide a lock 40, which may be used in connection with either of the forms described above, affording means for locking the sash in its closed position. I have illustrated this lock in connection with the form of the device set forth in Figs. 3 to 6. In order to apply this lock, I form the facing-strip 41 with a recess 42, in which the lock is mounted upon a horizontal pin 43, said pin being suitably supported in a plate 44, attached to the face of the facing-strip, as illustrated. The body of this lock is of substantially the form shown, presenting, preferably, a curved lower edge 45, a normally horizontal upper edge 46, and a toe 47, which projects substantially horizontally from a vertical outer face 48. The pin 43 is preferably attached to the lock at a point vertically above the center of gravity thereof, so that the lock would normally hang of its own accord in substantially the position in which it is shown in Fig. 3—that is, with the edge 46 in a horizontal plane. This lock 40 projects outwardly from the facing-strip, as illustrated, so as to lie in the path of the forward edge or wall 49 of the casing. When the sash is being moved downwardly to its closed position, the lower edge 50 of the opening 28 will engage the toe 47 and force the same in the direction of the window-frame, as illustrated in Fig. 4. The lock will, however, immediately return itself by gravity to its normal position, and when it returns the toe 47 will lie at the lower edge of the opening 28, as illustrated in Fig. 3,

and the lower edge of the toe 27 will be in contact substantially with the upper edge 46 of the lock. When the parts assume this relation, it will evidently be impossible to raise the sash from the outside, and the sash cannot be raised until the lock 40 is swung rearwardly, so as to disengage its toe from the casing of the fastener. The construction of the fastener enables the lock to be thrown back in order to disengage the same in the manner suggested. This would be accomplished by operating the catch 35 so as to depress its toe 27 from the position in which it is shown in Fig. 3. When this is done, the lower edge of the toe 27 of course depresses the adjacent part of the edge 46 of the lock, moving this edge down so as to rotate the lock upon its pin 43, as will be readily understood. Thus the lock 40 can be moved back into substantially the position in which it is shown in Fig. 4, releasing the sash and allowing the same to be raised.

I construct the casings of the locks in a way which facilitates the raising of the window-sash. In the form shown in Fig. 1 I extend the lower wall of the casing at the edge remote from the casement, so as to form a projecting hook or finger-hold 51.

With the form shown in Figs. 3 and 4 I project a hook 52 outwardly from the casing, preferably below the lip 35.

It will be seen that in both forms the hooks or finger-holds are located in a position conveniently reached while operating the catch.

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

1. In a fastener for a sash, in combination, a casing having an opening and adapted to be attached to the sash, a pivoted lock adapted to be attached to the sash-frame, and means for pivotally supporting said lock above its center of gravity, said lock being adapted to project into said opening to lock said sash.

2. In a sash-fastener, in combination, a casing adapted to be attached to the sash, a gravity-controlled lock adapted to be attached to the sash-frame, said casing having an opening which may be engaged by said lock, and a movable member mounted in said casing and projecting therefrom adjacent to said lock; said movable member affording means for withdrawing said lock from said opening.

3. In a device of the class described, in combination, a casing having an opening, a catch presenting a toe projecting from said opening, a gravity-controlled lock adapted to be attached to the sash-frame and having a projection adapted to be received in said opening below said toe, and means for actuating said catch to engage said lock for releasing the same.

4. In a device of the class described in combination, a casing, a catch pivoted therein and having a projecting toe and an enlarged tail constituting a counterpoise for said toe, and a pivoted block adapted to be attached to the window-casing and lying in the path of said toe, said toe affording means for actuating said block, said block affording means for locking the sash.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GAYLORD A. ORR.

Witnesses:
C. W. HAWBERT,
B. F. TIPTON.