J. HAGERTY.

WINDOW SPRING.

APPLICATION FILED DEC. 21, 1908.

943,147.

Patented Dec. 14, 1909.

2 SHEETS—SHEET 1.

FIG. I.

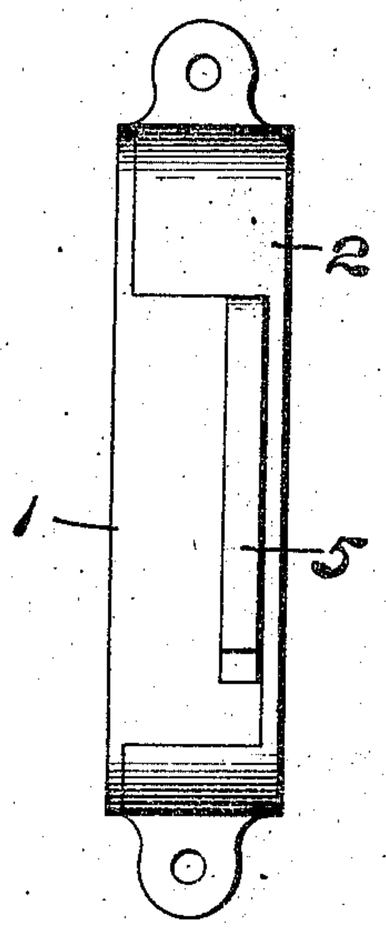


FIG. II.

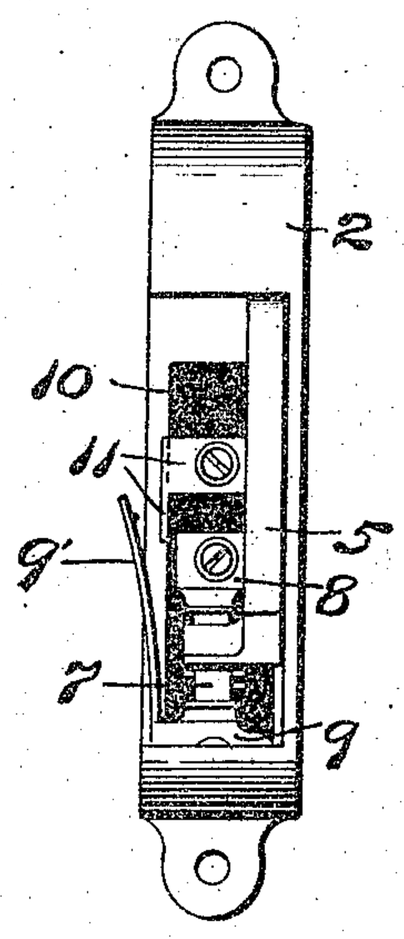


FIG. III.

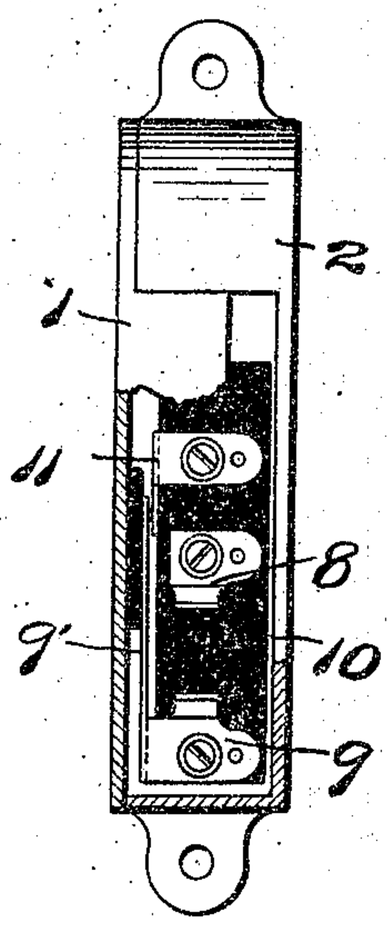
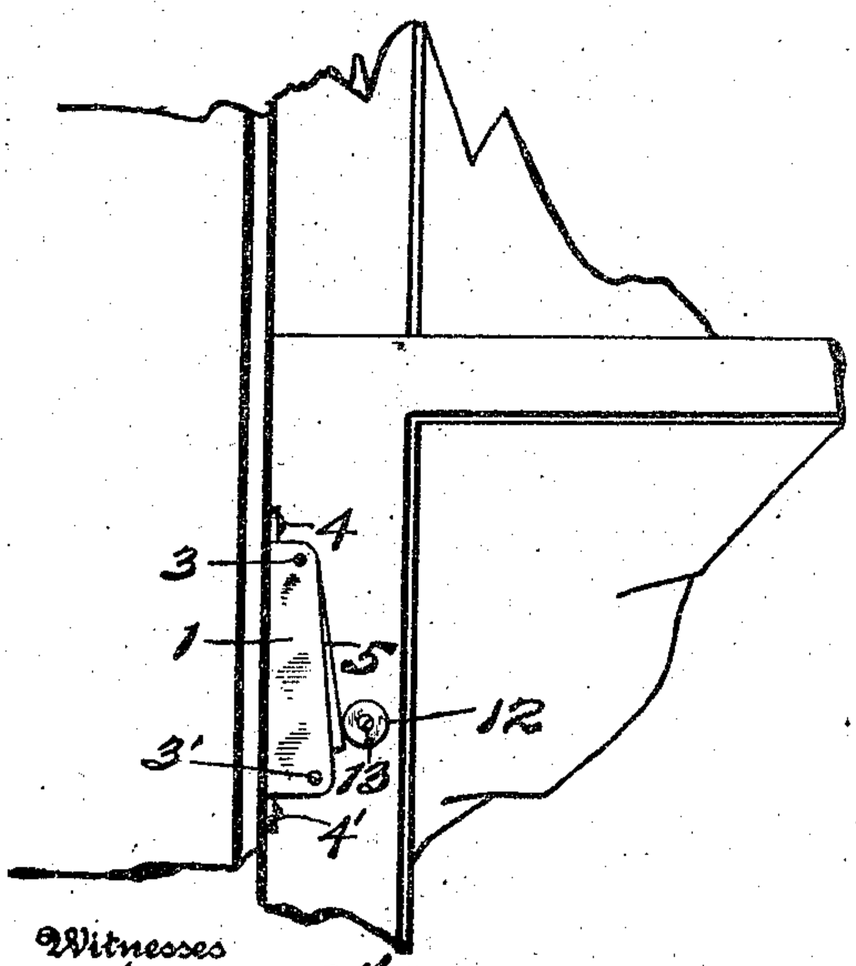


FIG. V.



Witnesses

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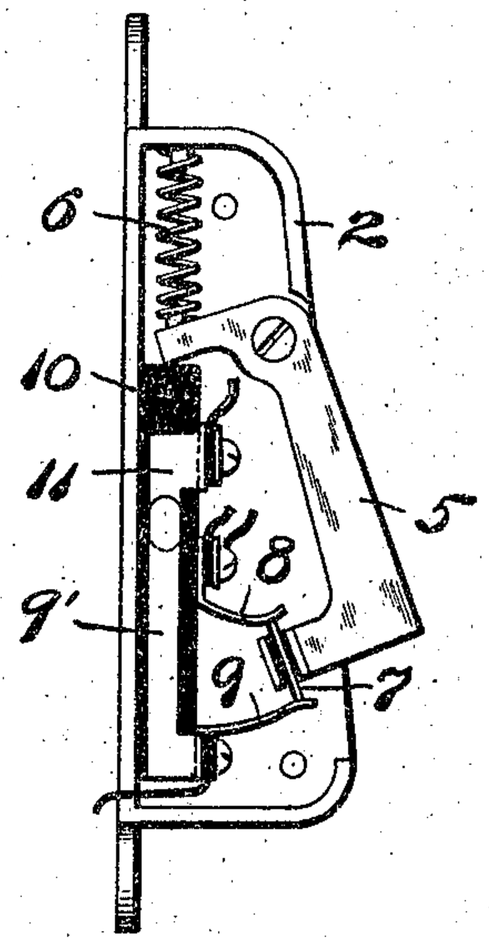
A. M. Lynch.

FIG. IV.



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2 SHEETS—SHEET 2.

FIG. VI.

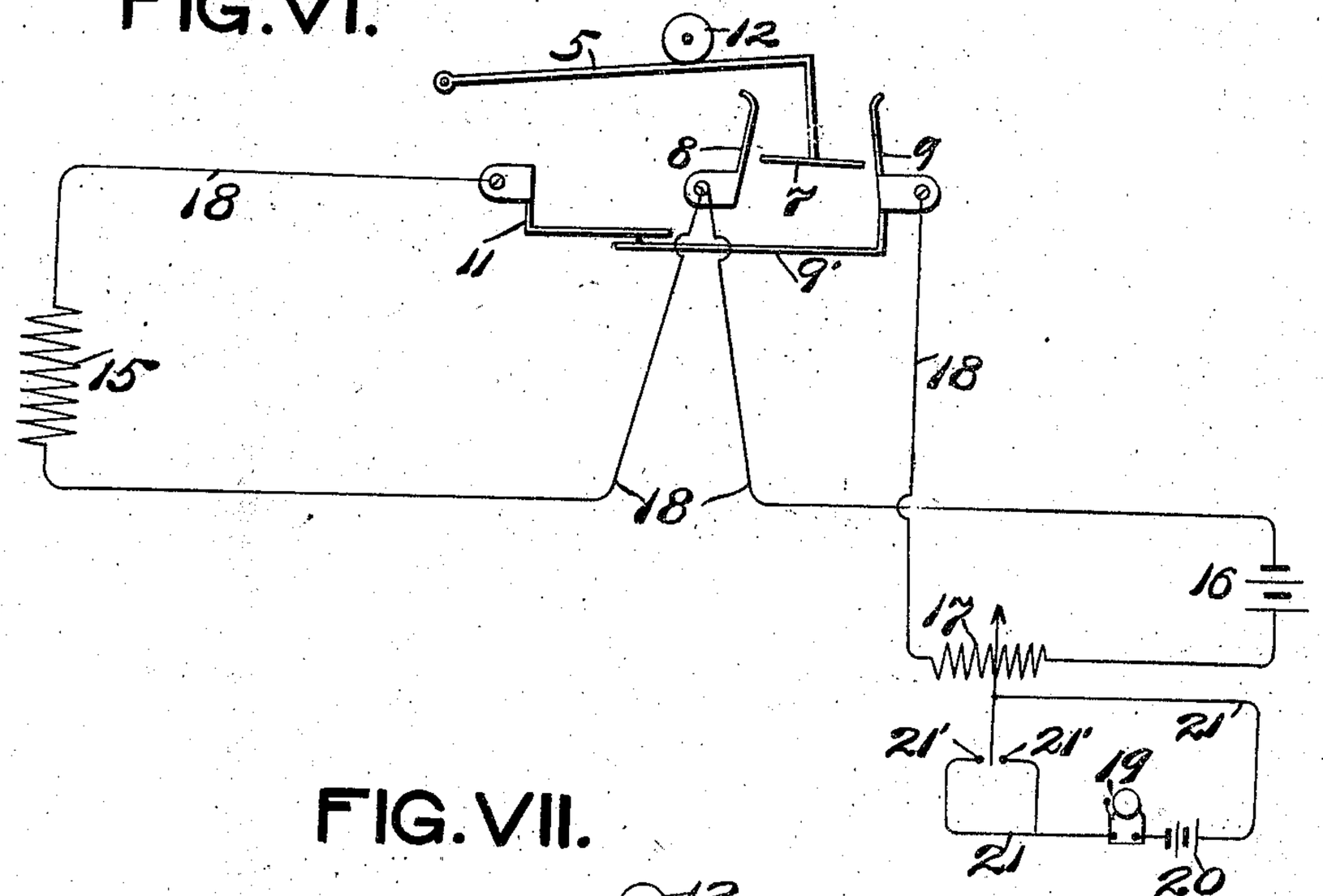
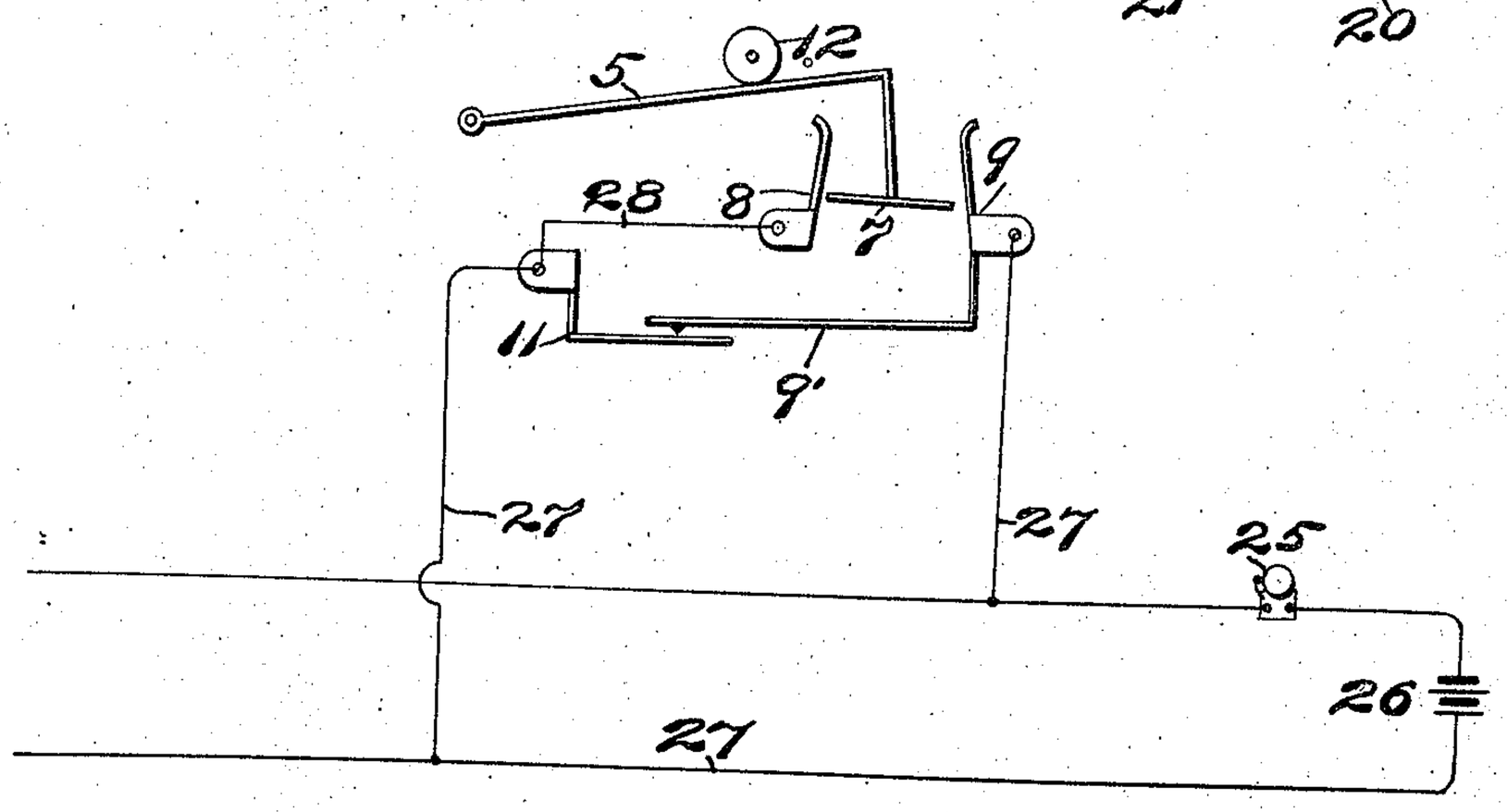


FIG. VII.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES HAGERTY, OF SCOTT TOWNSHIP, ALLEGHENY COUNTY, PENNSYLVANIA.

WINDOW-SPRING.

943,147. Specification of Letters Patent. Patented Dec. 14, 1909.

Application filed December 21, 1908. Serial No. 468,428.

To all whom it may concern:

Be it known that I, JAMES HAGERTY, a citizen of the United States, residing in Scott township, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Window-Springs; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of window springs as employed for operating signals, arranged in an electric circuit, when the windows to which the same is applied are adjusted, or when the spring is tampered with, thereby giving notice that someone is attempting to gain access to the room or building.

The invention is adapted for either open or closed circuits, is simple in construction, of few parts and does not necessitate defacing of the frame in its application thereto.

The nature and characteristic features of my invention will be more fully understood from the following specification, taken in connection with the accompanying drawings which form a part thereof, and in which:

Figure I is a front elevation of my improved spring. Fig. II is a similar view thereof, with one side of the casing removed. Fig. III is a front elevation of the same, partly in transverse section and with the operating lever removed. Fig. IV is a side elevation of the device having the side of the casing removed. Fig. V is an elevated portion of a window and attending frame, showing the application of the device thereto. Fig. VI is a diagram illustrating its application to a closed circuit alarm system, and Fig. VI^a is a like view showing its application to an open alarm circuit, similar detail parts of the device being designated by like numerals in all views where they occur.

The invention comprises in its structure, a casing formed of two parts 1 and 2, secured to one another by screws 3 and 3′ and adapted to be connected to the inner edge of the window-frame by screws 4 and 4′, the upper face portion of said casing being preferably inclined.

Pivotally secured within and projecting through an opening in the inclined face of said casing is an inclinedly disposed lever 5, held under tension by a spring 6 at its rear end and provided at its forward end with an insulated contact plate 7, which plate, when the lever carrying the same is in its abnormal position, is adapted to engage with the upper ends of the leaf spring contact members 8 and 9 which are securely mounted upon a block of insulating material 10. One of the contact members, preferably that designated as 9, is provided with an extension 9′ which is turned down over the edge of the insulation block and disposed toward the opposite end of the same and normally held in engagement with another contact member 11, carried by said insulating block, by means of the aforesaid casing portion 1, a strip of insulating material being inserted between.

To the window sash is attached a member to engage and normally depress the lever and hold its attending contact plate out of engagement with the aforesaid contact members 8 and 9, which member is preferably in the form of a roller 12 secured in place to the window sash by a screw 13.

In practice, where the device is employed for closed circuit work, reference is to be had to Fig. VI, in which instance the contacts 8, 9 and 11 are connected in a closed electric circuit with a resistance coil 15, gravity batteries 16 and galvanometor 17, by means of wires 18. Associated with this closed circuit is a signal circuit, embracing a bell 19 and battery 20, one end of the circuit wire 21 being connected to the pointer of the galvanometer, the end of said pointer being normally disposed between the contacts 21′ connected to the circuit wire. In this case, it is to be remembered that the roller on the window sash is normally maintaining the contact plate 7 out of engagement with the contacts 8 and 9, by depressing the lever carrying the same, and that the extension 9′ and contact 11 are held in normal engagement by the pressure of the detachable portion of the casing acting thereon. Now, should any one attempt to adjust the window-sash the roller 12 will pass off the lever 5, causing the plate 7 to engage the contacts 8 and 9, thus short circuiting the current through the galvanometer, causing its pointer to deflect and engage with one of the contacts 21′, thus closing the circuit

and ringing the bell. Again, should the spring be tampered with, by removing the casing portion 1, the contact 9′ would disengage with that 11 (as shown at Fig. II,) opening the gravity circuit and causing the pointer to deflect in the opposite direction from that previously described, causing the same to engage with the other contact 2, closing the circuit of and ringing the bell.

When the spring is to be employed for open circuit work, as at Fig. VII, the extension 9^ and contact 11 are normally separated by the pressure of the casing section 1 thereupon, the contacts 8 and 9 being connected in circuit with a bell 25 and a battery 26 by wires 27 and the contact 11 with the contact 8 by a wire 28. Should an attempt be made to open the window the roller 12 carried thereby will pass off the lever causing it to move and bring the plate 7 thereof in contact with the members 8 and 9, thus closing the circuit and ringing the bell 25.

It is intended to attach two springs to the window frame, one for each sash, and as one sash operates in a reverse direction from the other the springs will be arranged likewise.

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

1. In a window spring, a closed casing carried by the inner exposed surface of the window frame alongside of the sash, an inclined lever extending therefrom and normally held in its depressed position, a pair of contacts insulated from one another and the casing in the path of and adapted to engage the free end of the lever therebetween, a member carried by the face portion of the window sash normally engaging with and retaining the lever in its depressed position, and a spring for placing tension upon the lever and causing it to adjust itself to its abnormal position between the contacts and retain engagement therewith when released by said member.

2. In a window spring, a casing carried by the window frame and provided with a removable portion, a lever extending therein and normally held under tension in its depressed position, a pair of contacts arranged in said casing in the path of the free end of said lever, a separate contact member retained in normal relation with one of the aforesaid contacts by the removable portion of the casing, and a member carried by the window sash normally engaging with and retaining the said lever in its depressed position.

3. In a window spring, a closed casing carried by the inner exposed surface of the window frame alongside of the sash, a lever pivotally arranged therein and normally held in its depressed position, an insulated contact carried by said lever, a pair of contacts insulated from one another and the casing arranged in said casing, a member carried by the window sash normally retaining said lever in its depressed position, and a spring for placing tension on said lever and causing it to adjust itself to its abnormal position to make and maintain engagement of the contact carried by the lever with the pair of contacts when released by said member.

4. In a window spring, a casing carried by the window frame and provided with a removable portion, a lever pivotally arranged therein and normally held under tension in its depressed position, a contact member insulatedly secured to the free end of said lever, a pair of contacts arranged in the path of the contact carried by the said lever, a separate contact member retained in its normal relation with one of the pair of contacts by the removable portion of the casing, and a member carried by the window sash normally engaging with and retaining the said lever in its depressed position.

5. In a window spring, a closed casing carried by the inner exposed surface of the window frame alongside of the sash the face portion of said casing being inclined, a lever pivotally arranged within one end of said casing and extending lengthwise thereof and projecting through its inclined face at a greater inclination and normally held in its depressed position, a pair of spaced contacts arranged in said casing and insulated from one another and from the casing the free end of the lever being disposed therebetween, a roller carried by the face portion of the window sash normally engaging with and retaining the lever in its depressed position, and a spring for placing tension on said lever and causing it to adjust itself to its abnormal position to make and maintain engagement of the end of the lever with the pair of contacts when released by said roller.

6. In a window spring, a casing carried by the window frame and provided with a removable portion, an inclined spring actuated lever pivotally arranged in and projecting from said casing, a pair of contact members arranged therein and adapted to be engaged by the free end of the lever to close a circuit, a separate contact therein retained in its normal relation with one of the pair of contacts by the removable portion of the casing, and a roller carried by the window sash to engage and operate said lever.

In testimony whereof, I affix my signature, in presence of two witnesses.

JAMES HAGERTY.

Witnesses:
R. S. HARRISON,
D. B. OAKS.