June 15, 1926. 1,588,467

A. M. PRUITT

SWITCH

Filed May 1, 1922 2 Sheets-Sheet 1

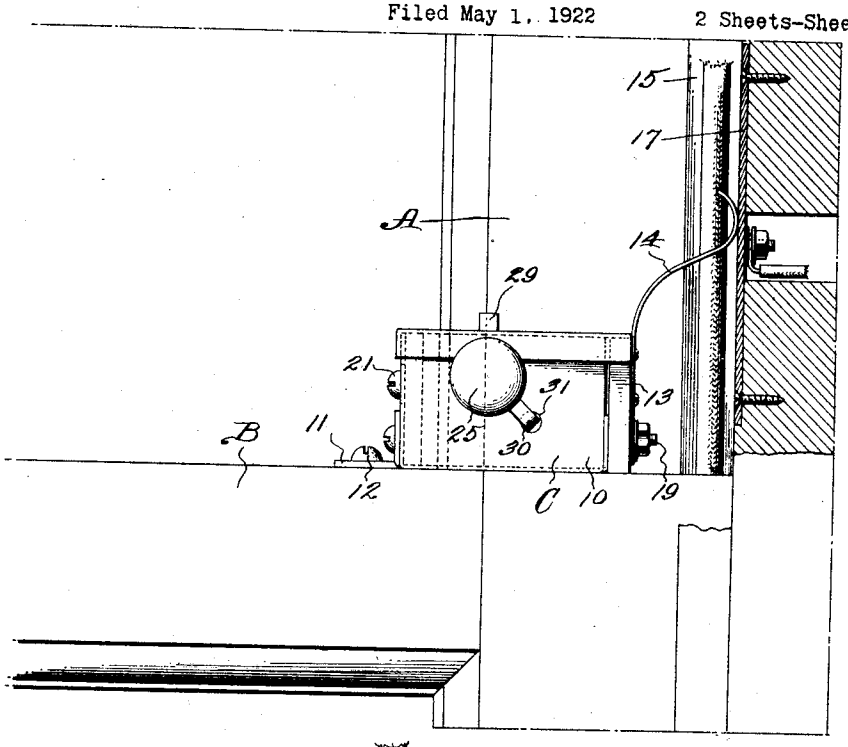


Fig. 1.

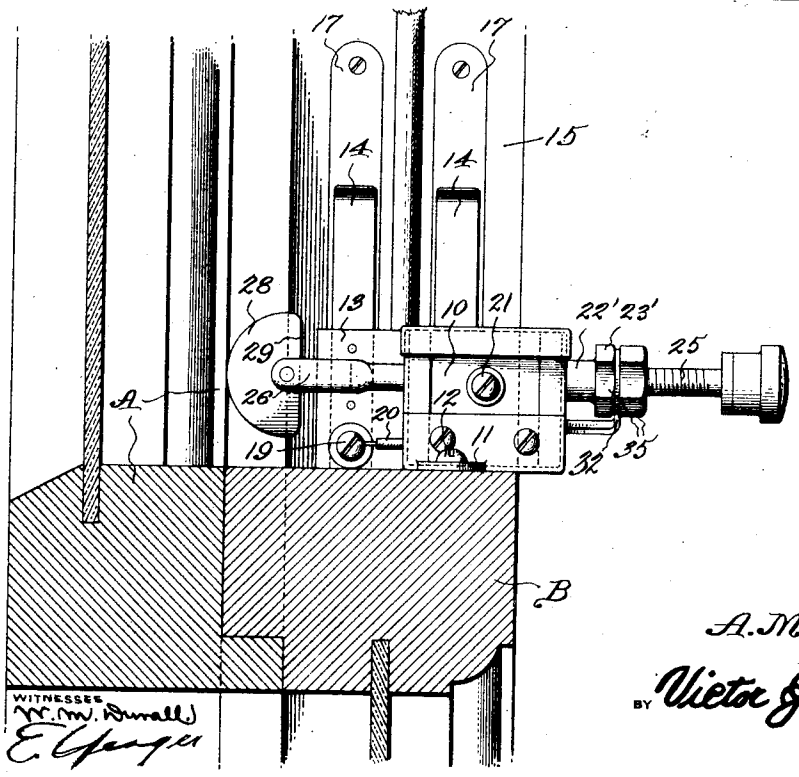


Fig. 2.

WITNESSES
W. M. Duvall
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SWITCH

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Fig. 3.

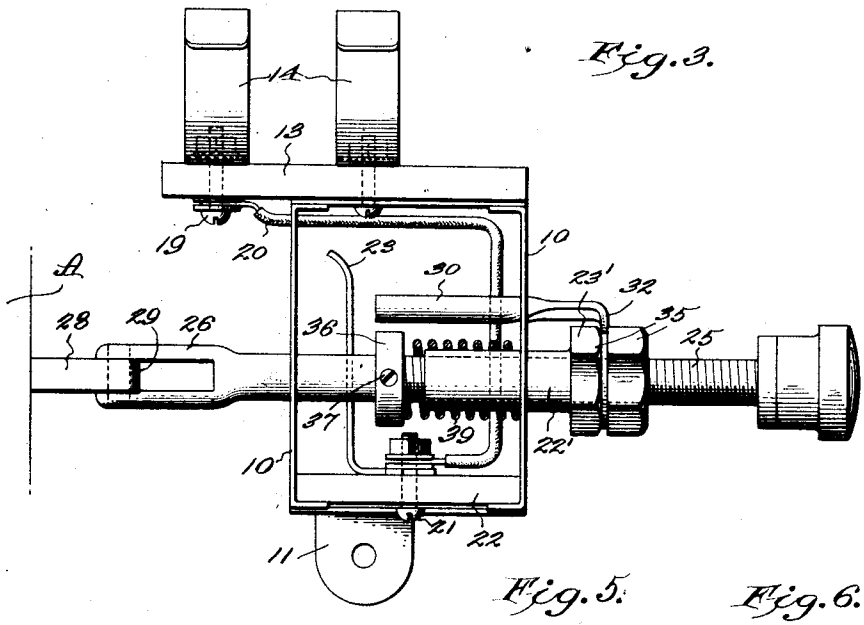


Fig. 5.

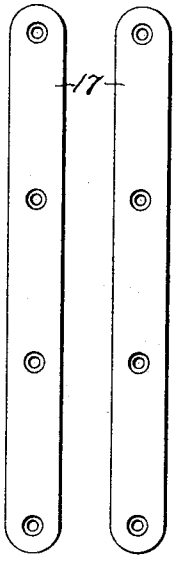


Fig. 6.

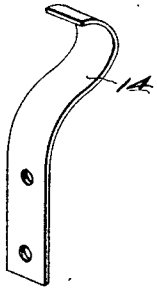


Fig. 4.

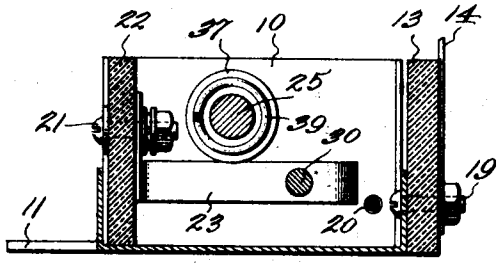


Fig. 8.

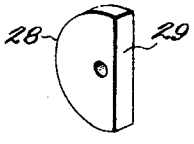
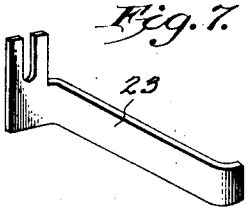


Fig. 7.



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Patented June 15, 1926. 1,588,467

UNITED STATES PATENT OFFICE.

AUGUST MARSHALL PRUITT, OF CLEVELAND, OHIO.

SWITCH.

Application filed May 1, 1922. Serial No. 557,585.

This invention relates to burglar alarms, which includes a circuit closer adapted to be associated with a window sash, so that incident to the movement of either the upper or lower sash, the circuit is closed to sound the alarm which can be arranged at any desired location about the building.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawings, the invention residing in the construction, combination, and arrangement of parts as claimed.

In the drawings forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:—

Figure 1 is a fragmentary view of a window showing the circuit closer associated therewith.

Figure 2 is a sectional view taken on line 2—2 of Figure 1.

Figure 3 is an enlarged fragmentary view of the circuit closer removed from the window and showing the normal position of the parts.

Figure 4 is a sectional view taken on line 4—4 of Figure 3.

Figure 5 is a detail view of the fixed contacts.

Figure 6 is a detail view of one of the movable contacts.

Figure 7 is a detail view of the resilient finger.

Figure 8 is a detail view of the semi-disk like member.

Referring to the drawings in detail, A and B indicate respectively, the upper and lower sashes of a window of well-known construction, and the circuit closer forming the subject matter of the present invention indicated generally at C is arranged upon the top of the lower sash B.

The alarm (not shown) may be arranged at any desired location about the building and connected in circuit, so that incident to the raising or lowering of either sash, the circuit is closed to sound the alarm.

The circuit closer includes a metallic casing 10, and is provided with an apertured lug 11, through which a suitable fastening element 12 is passed in order to secure the casing 10 upon the top of the lower sash as illustrated in Figures 1 and 2. Secured to one side of the casing is a piece of insulating material 13 upon which is mounted a pair of movable contacts 14, each being of a resilient nature, and curved in a manner shown to operate in the grooves 15 of the window casing. Secured in these grooves are fixed contact strips 17 and it is of course understood that the movable contacts 15 slide over the contacts 17. One of the movable contacts is grounded to the casing. The other contact 14 is provided with a binding post 19 to which is secured a conducting wire 20, the latter being extended to the binding post 21 at the opposite side of the casing and mounted upon a piece of insulating material 22. Also supported by the binding post 21 is a resilient contact finger 23 which is of substantially L-shaped formation and arranged to operate within the casing. This resilient contact finger is normally insulated from the casing, and the circuit is of course not closed or completed until moved into contacting engagement with the casing. Arranged to slide through opposed walls of the casing is a spring pressed plunger or rod 25, which is bifurcated at one end as at 26, and pivoted between the separated portions defined by said bifurcation, is a semi-disk like member 28 which has a flat side or face 29.

Also carried by the plunger is a rod 30 which operates within the casing through an opening 31 in one wall thereof. This rod is provided with an offset extremity 32 which is apertured to receive the plunger, and held associated therewith by suitable lock nuts 35. The rod is disposed to engage the contact finger and move the latter into contact with the casing in order to close the circuit incident to the movement of either sash as above described. Slidable upon the plunger is a collar 36 which may be held fixed to the plunger in any given position by means of a cotter pin or the like 37, and this collar is utilized to regulate the tension of the spring 39. Also surrounding the plunger rod is a sleeve 22′, and this sleeve protects the threads of the plunger rod as will be readily understood. The sleeve is provided at one end with a hexagon flange 23′ which forms one of the lock nuts, thereby protecting the threads and acting as a movable bearing operating in the opening provided for the plunger rod.

In practice, the casing is mounted upon the upper part of the lower sash B, with the semi-disk like member arranged vertically

and with its curved edge contacting the window as illustrated in Figures 1 and 2. It is of course understood that when the parts are in this position, the plunger is placed under tension of the spring 39, and consequently, when either sash is moved, the semi-disk like member is forced to turn about its pivot until the flat edge is brought into confronting relation with the glass, a position which allows the plunger to move in a direction of the pane under the influence of the spring. Incident to this movement, of the plunger, the rod 30 moves in the same direction, engaging the finger 23, moving the latter into contact with the casing, and thereby closing the circuit. As above stated, the current passes through one of the movable contacts 14, and from the binding post thereof through the conducting wire through the binding post 19, through the finger 23 and the casing 10. The finger is normally insulated from the casing, and consequently, the signal cannot be sounded until this finger is moved into contact with the casing.

While it is believed that from the foregoing description, the nature and advantages of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown and described, and that such changes may be resorted to when desired as fall within the scope of what is claimed.

What I claim is:—

1. A circuit closer comprising a frame included in a normally open circuit, and constituting a fixed contact, a plunger slidably mounted on said frame and having one end bifurcated, a coil spring encircling the plunger and bearing against the frame, a collar carried by the plunger and with which one end of the spring is engaged, a movable contact adapted to be moved into engagement with the fixed contact upon movement of the plunger in one direction, a semi-circular element pivotally mounted in the bifurcated end of the plunger, and adapted to have its rounded edge normally set in engagement with an object to hold said movable contact spaced from the fixed contact, said element being moved upon its pivot with the change of the relative positions of said object and element, thereby allowing the plunger to move under the influence of the spring to close the circuit.

2. A circuit closer comprising a frame included in a normally open circuit, and constituting a fixed contact, a plunger slidably mounted on the frame and having one end bifurcated, yieldable means associated with the plunger for moving the latter in one direction, a movable contact arranged to be operated by the plunger and moved thereby into engagement with the fixed contact, a semi-circular element pivoted in the bifurcated end of the plunger and having its rounded edge adapted to be set in engagement with an object to hold the plunger retracted, and permitting movement of the plunger by said yieldable means, when the straight edge is arranged to contact said object incident to the change of the relative positions of said object and element, an L-shaped member carried by the plunger and having one branch disposed to engage and operate said movable contact as described.

In testimony whereof I affix my signature.

AUGUST MARSHALL PRUITT.