

(No Model.)

A. ISKE.

CIRCUIT CLOSER FOR BURGLAR ALARMS.

No. 304,732.

Patented Sept. 9, 1884.

Fig. 3.



Fig. 5.

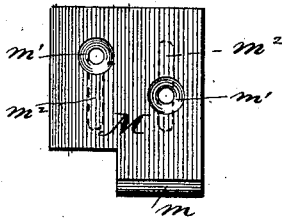


Fig. 4.

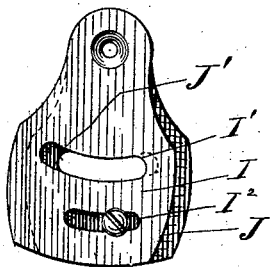


Fig. 2.

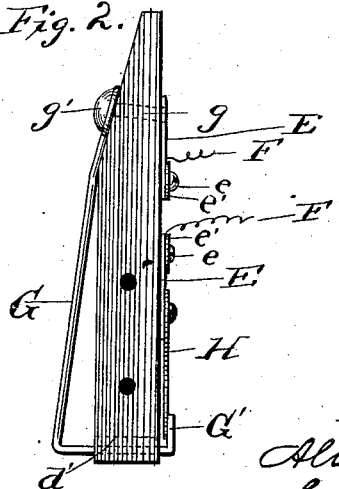
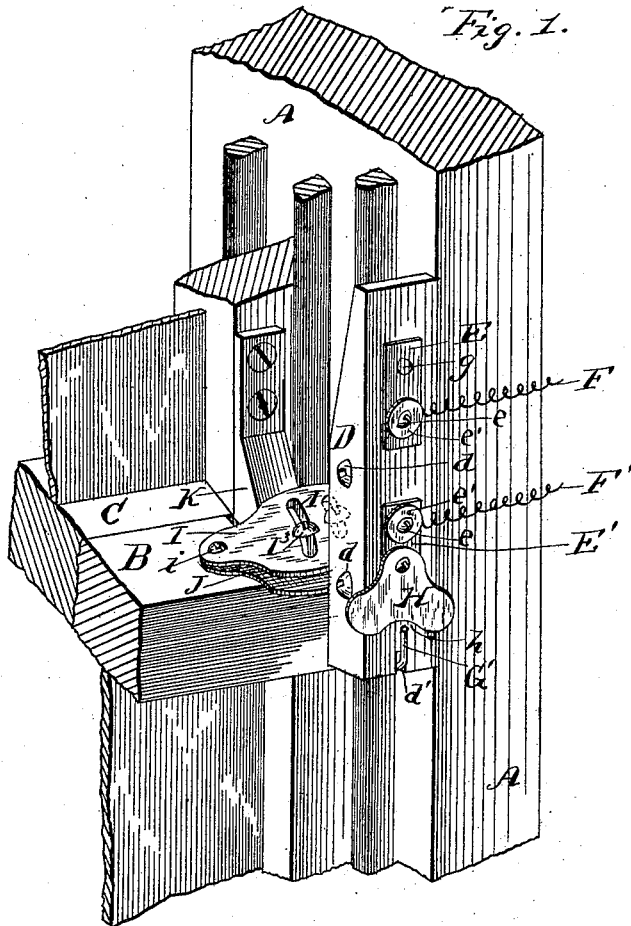


Fig. 1.



WITNESSES

Chas. R. Burr
W. J. Purris

INVENTOR

Albert Iske
by W. H. Babcock
Attorney

UNITED STATES PATENT OFFICE.

ALBERT ISKE, OF LANCASTER, PENNSYLVANIA.

CIRCUIT-CLOSER FOR BURGLAR-ALARMS.

SPECIFICATION forming part of Letters Patent No. 304,732, dated September 9, 1884.

Application filed December 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALBERT ISKE, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Circuit-Closers for Burglar-Alarms; and I do hereby 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 letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to devices for opening and closing the circuits of electric burglar-alarms when a window-sash is raised or lowered or a door turned on its hinges.

The said invention consists, partly, in the combination of a plate forming part of an electric circuit with a circuit-closing spring, which also forms part of the electric circuit, and tends to come in contact directly with said plate, and a device attached to a window-sash or other means of ingress, which device normally holds said spring away from said plate, the moving of said window or other means of ingress freeing said spring from said device and allowing the circuit to be closed by the action of said spring.

It also consists in a circuit-closing spring, in combination with a plate forming part of an electric circuit, a lug or projection on the frame of the upper sash of a window, and a movable plate or plates interposed between said lug and said spring, and operating with said lug to hold said spring out of contact with the plate first above mentioned while the window remains closed.

It also consists in a circuit-closing spring, in combination with a pivoted triangular or three-armed plate forming part of an electric circuit, and a plate or plates which prevent said spring from closing the circuit until the means of ingress are opened.

It also consists in an adjustable pair of plates attached to a window-sash, in combination with an incline-faced lug on the other sash, and a circuit-closing device held open by said lug and plates until one sash or the other is moved, as stated.

It also consists in an adjustable plate secured

to the top of a window-sash, in combination with a circuit-closing spring and contact-plate forming part of an electrical circuit, said adjustable plate holding said spring out of contact with said contact-plate until the lower sash is raised.

It also consists in the combination of the circuit-closing spring of a burglar-alarm with a three-arm contact-plate pivoted at one arm and adapted to turn, so that either one of the other arms may be in position for contact with said spring, the space between said lower arms being recessed, so that when said plate is turned to an intermediate position the alarm will not operate.

It further consists in the combination, with a wedge-faced lug attached to the upper sash of a window, of a circuit-closing spring attached to the window-frame, and two interposed plates pivoted together on the top of the lower sash, said plates being provided with slots and a stop for limiting their motion on their pivot, and with connection by slot and screw for regulating their combined width.

In the accompanying drawings, Figure 1 represents a perspective view of a window and window-frame, and the devices attached thereto, embodying the said invention. Fig. 2 represents a detail view of the circuit-closing spring. Fig. 3 represents a similar view of wedge-faced lug attached to the upper sash. Fig. 4 represents a similar view of the two plates pivoted on the top of the lower sash, and Fig. 5 represents a single plate which may be substituted for the two pivoted plates above mentioned.

A designates the frame of a window, B the lower sash-frame, and C the upper sash-frame. To the aforesaid window-frame A, opposite the meeting-rails of said sash-frames, and extending considerably above them, is secured a bar or rail, D, by means of screws *d* or other readily-detachable fastenings. This bar or rail serves as a support for the circuit-closing devices. On the front of this bar or rail are two plates, E E'. Through each of these plates is passed a screw, *e*, which is provided with a washer, *e'*. One of these screws and its washer clamp the end of a wire, F, to the upper plate, E, while the other screw *e* and washer *e'* clamp the end of another wire, F', in like manner to lower plate, E'. These wires F F' are the cir-

cuit-wires of a burglar-alarm, suitable devices for generating electricity and for creating an alarm being of course included in the circuit. These are not shown, as they do not form part of my present invention, the latter not being confined to any particular kind of generator or signaling mechanism. The upper plate, E, has a pin or rivet, *g*, attached to it, which extends through bar D, and is connected on the other side thereof to a button, *g'*, or other suitable device, to which one end of a long spring, G, is attached. This spring extends down to the lower end of said bar, inclining gradually inward as it descends, and then bends forward through a guide-slot, *d'*, in the lower end of said bar, and upward in front of the same, forming a terminal hook, G'. The lower plate, E', has a triangular or three-armed plate, H, pivoted to it by one of the three arms of said plate. Either one of the other arms will serve as a handle, and the position of the third arm should be almost vertically under the pivotal point of said plate. When thus placed, the said third arm, as shown in Fig. 1, is behind the tip of hook G', and the operation of spring G is to bring this hook into contact with this lower or third arm of the pivoted plate H, thereby closing the circuit. Under ordinary circumstances, however, this circuit-closing action of said spring is prevented by the following devices: On the top of the lower sash two plates, I J, are pivoted at *i*, the one on top of the other. These have corresponding curvilinear slots I' J', one in each, and the upper plate, I, has in addition a slot, I'', of similar curvature, through which an adjusting-screw is passed down into the lower plate, J. This allows said plates to be spread apart to a greater or less extent by moving either one of them or both of them on pivot *i*, loosening said screw, of course, to allow such adjustment, and clamping the plates by said screw again when said adjustment is effected. One edge of one of said plates bears against the lower part of spring G aforesaid, and the other edge of the other one of said plates is in contact with the face of a wedge-form lug, K, which thickens as it extends downward. Thus when the window is closed at top and bottom, as shown in Fig. 1, the inclined lug block or projection K forces the plates I J (they having been duly adjusted with regard to width) against spring G, so as to overcome its resistance and move its end G' away from plate H, thus breaking the circuit, and holding it broken until the lower sash is raised or the upper one lowered. As soon as the pressure on the spring has been relieved thereby, the said spring automatically closes the circuit and sounds an alarm. The adjustability of plates I J as to their combined width enables me to compensate for any weakening of spring G, to adapt the devices to sash-frames of different thickness, and, when desired, to hold the spring G out of contact with the plate H until the lower sash has been raised some little distance, thus making it possible to throw in letters,

newspapers, or parcels without sounding the burglar-alarm. A screw, F, extends down through slots I' J' into the top of sash C, and acts as a stop to limit the motion of plates I J. The triangular or (more exactly) three-armed shape of plate H adapts it to be used on the window-frame at either side of a window. It is recessed between the arms, and when turned so that the lower recess, *h*, is directly under the pivot, the hook G' of spring G will set into this recess *h* without touching plate H, and the circuit will remain broken even after said spring is left free to operate. This affords a very convenient means of making the alarm temporarily inoperative when desired.

All the foregoing devices may be easily attached to any window and window-frame and detached therefrom. I do not confine myself to the precise shape, construction, and arrangement shown, as these may obviously be modified in divers ways, though I prefer them as hereinbefore set forth.

When the upper sash is immovable, I have no need for two plates, I J, on the lower sash, but may use instead the single plate M, (shown in Fig. 5,) the same having on one (the outer) edge a flange or bead, *m*, which bears against the spring. This plate may be fastened to said sash by screws passing through holes *m'*; but a slot, *m''*, (shown in dotted lines,) is a desirable substitute for said holes, inasmuch as it allows the adjustment of said plate.

These devices may, of course, be applied to a door, skylight, or any other means of ingress, instead of applying them to a window, as described.

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

1. The combination of a plate forming part of an electric circuit with a circuit-closing spring which also forms part of the electric circuit, and tends to come in contact directly with said plate, and a device attached to a window-sash or other means of ingress, which device normally holds said spring away from said plate, the moving of said window or other means of ingress freeing said spring from said device, and allowing the circuit to be closed by the action of said spring, substantially as set forth.

2. A circuit-closing spring, in combination with a plate forming part of an electric circuit, a lug or projection on the frame of the upper sash of a window, and a movable plate or plates interposed between said lug and said spring, and operating with said lug to hold said spring out of contact with the plate first above mentioned, while the window remains closed.

3. A circuit-closing spring, in combination with a pivoted triangular or three-armed plate forming part of an electric circuit, and a plate or plates which prevent said spring from closing the circuit until the means of ingress is opened.

4. An adjustable pair of plates attached to a window-sash, in combination with an incline-faced lug on the other sash, and a circuit-closing device held open by said lug and plates until one sash or the other is moved, as stated.

5. An adjustable plate secured to the top of a window-sash, in combination with a circuit-closing spring, and contact-plate forming part of an electrical circuit, said adjustable plate holding said spring out of contact with said contact-plate until the lower sash is raised.

6. In combination with the circuit-closing spring of a burglar-alarm, a three-arm contact-plate pivoted at one arm, and adapted to turn so that either one of the other arms may be in position for contact with said spring, the space between said lower arms being recessed, so

that when said plate is turned to an intermediate position the alarm will not operate. 20

7. In combination with a wedge-faced lug attached to the upper sash of a window, a circuit-closing spring attached to the window-frame, and two interposed plates pivoted together on the top of the lower sash, said plates being provided with slots, and a stop for limiting their motion on their pivot, and with connection by slot and screw for regulating their combined width, substantially as set forth. 25

In testimony whereof I affix my signature in presence of two witnesses. 30

ALBERT ISKE.

Witnesses:

P. DONNELLY,
ZURIEL SWOPE.