

(No Model.)

W. C. THOMPSON.

ELECTRIC CIRCUIT CLOSER FOR BURGLAR ALARMS.

No. 465,602.

Patented Dec. 22, 1891.

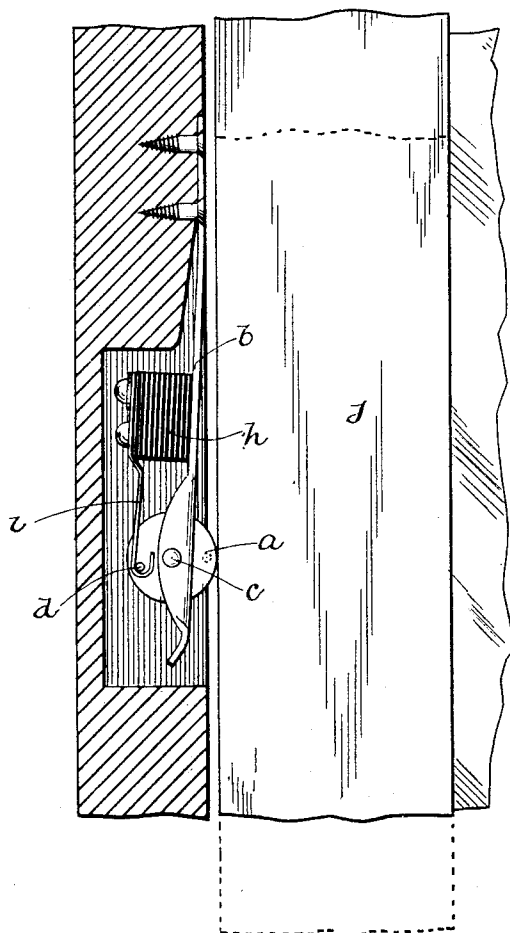


Fig. 1.

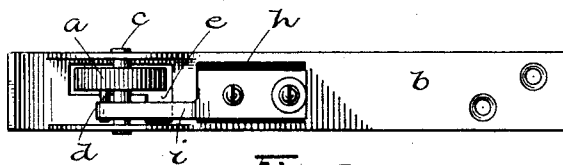


Fig. 2.

Witnesses.

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ELECTRIC-CIRCUIT CLOSER FOR BURGLAR-ALARMS.

SPECIFICATION forming part of Letters Patent No. 465,602, dated December 22, 1891.

Application filed October 19, 1889. Serial No. 327,535. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. THOMPSON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a certain new and useful Improvement in Electric-Circuit Closers for Burglar-Alarms, (Case 1,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to electric burglar-alarms of the class adapted to be operated by the moving of the window-sash in its frame. The object of the invention is to provide a circuit-closer for electric burglar-alarms that shall be simple in its construction and operation.

Heretofore a circuit-closing device has been used consisting in a metal strip attached to the window-frame and bearing a roller which presses against the edge of the window-sash and adapted to rotate when the sash is moved. The said roller is of metal, except a segment of the periphery, which is of insulating material. Mounted on a rubber block secured to the carrying-strip is a contact-spring, which presses on the periphery of the roller. When the sash is raised, the roller is rotated and the metal portion brought under the spring, and when lowered the insulating portion is brought under said spring to break the circuit, as shown in Letters Patent No. 198,529, granted John Young December 25, 1877, for electric burglar-alarms.

My invention consists in the combination of a flexible strip or spring carrying at its end a roller which is provided with a lateral pin adapted to engage with a hooked contact spring or brush mounted on an insulated block secured to the flexible strip.

I have illustrated my invention as attached to the frame of a window, the corrugated roller pressing against the edge of the window-sash and in position to close the circuit of the battery and gong, the poles of the battery being connected to the flexible strip and contact-spring, respectively.

My invention will be more readily understood by reference to the accompanying drawings, in which—

Figure 1 is an elevation of a portion of a window frame and sash provided with an electric circuit-closer embodying my invention. Fig. 2 is a view of my circuit-closer detached. Like parts are indicated by similar letters of reference throughout the different figures.

A roller *a* is carried on the flexible strip *b* and rotates on the pivot *c*, provided thereon. Said roller *a* is provided with a lateral pin *d* and extends through an opening *e* in the flexible strip *b*, said opening *e* being of a size and shape to allow the lateral pin in the side of the roller to pass through also, but only on one side of the pivot, as shown. The roller is thus allowed to make only the greater part of a revolution on its axis.

Mounted on a rubber block *h*, secured to the flexible strip *b*, is a hooked contact-spring *i*. Said hooked spring *i* is placed on the side of the roller *a* which is provided with the lateral pin *d*, but does not normally make contact therewith. The hook on the end of the contact-spring *i* serves to make the contact with the lateral pin *d* in the roller *a* more certain, to limit the motion thereof, and in a measure to lock the said pin and roller in position when in engagement therewith.

In Fig. 1 the window-sash *j* is supposed to have been raised and the roller *a* is shown in position to complete the circuit of the battery and gong through the pin *d* and hooked contact-spring *i*. If the sash should be lowered, as indicated by the dotted lines, the roller *a* would be revolved and the pin *d* brought around against the front side of the flexible spring *i*, as shown at *x*. In this position the circuit of the battery and gong would be opened and consequently the alarm silenced. It will be seen that the window *j* may be raised and left at nearly the full height and yet the alarm be in position to give warning if the sash is raised still higher. This is accomplished by simply raising the sash to a height greater than that desired and then lowering it a short distance, thus leaving the circuit open and yet still in a position to give an alarm if the window should be raised. The periphery of the roller is preferably corrugated, so as to increase the friction between the roller and sash, to insure rotation when the sash is raised or lowered. The friction

between the spring and lateral pin keeps their surfaces bright and clean, thus rendering an electrical connection between the terminals of the battery sure.

5 I preferably place my device in a mortise near the top of the lower sash. It is evident, however, that my device may be used either in connection with the upper or lower sashes of a window.

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

1. The spring mounted upon the window-frame opposite the edge of the sash, and a metallic roller provided with a metallic lateral pin, said roller being carried at the free end of said spring and projecting through a slot-opening therein to bear against the edge of the window-sash, in combination with the
15 hooked contact-spring which carries the roller, said hooked spring being placed in the path of the said lateral pin to form contact there-

with and hold the said wheel from rotating after the window-sash is raised a fixed distance, whereby electrical contact is main- 25 tained between the spring carrying the roller and the hooked spring, substantially as shown and described.

2. The circuit-closer consisting in the combination, with the spring carrying the roller, 30 of the hook *i*, insulated therefrom, a lateral pin provided upon the roller and adapted to be brought against the hook to close the contact therewith when the roller is rotated in one direction, and a stop in the path of the 35 pin for limiting the movement of the roller, substantially as and for the purpose specified.

In witness whereof I hereunto subscribe my name this 2d day of October, A. D. 1889.

WILLIAM C. THOMPSON.

Witnesses:

GEO. W. TEITSWORTH,
WM. H. BLODGETT.