

No. 662,719.

Patented Nov. 27, 1900.

C. L. HAIGHT.  
ELECTRIC FIRE ALARM.

(Application filed Jan. 25, 1900.)

(No Model.)

Fig. 1.

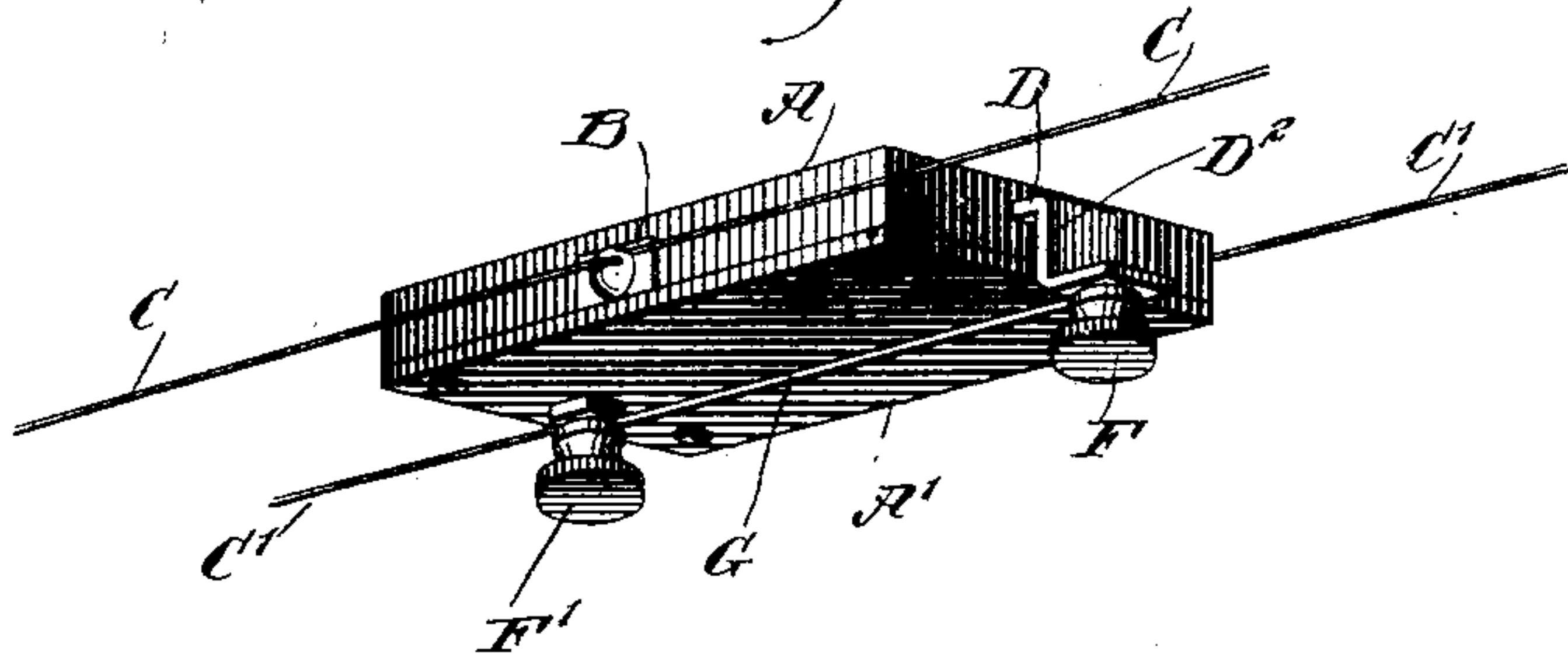


Fig. 2.

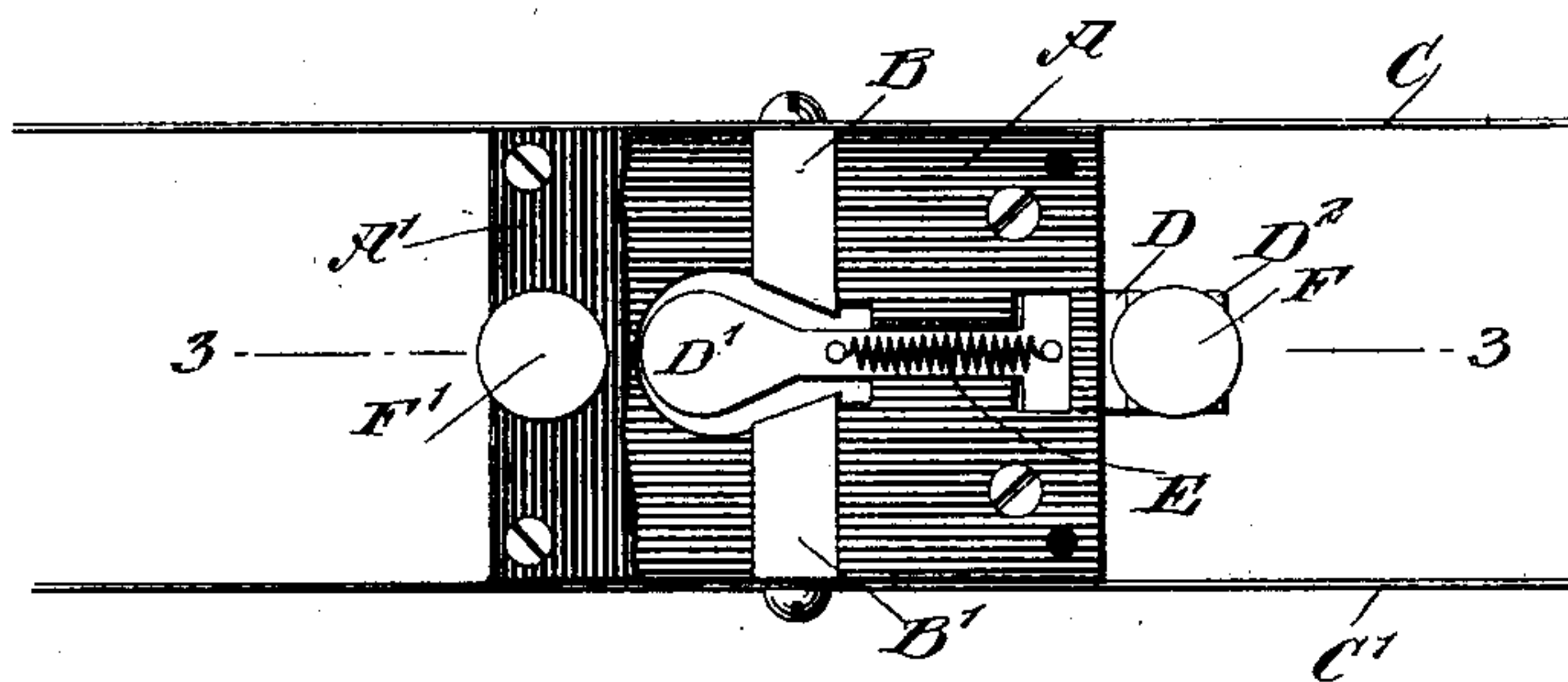
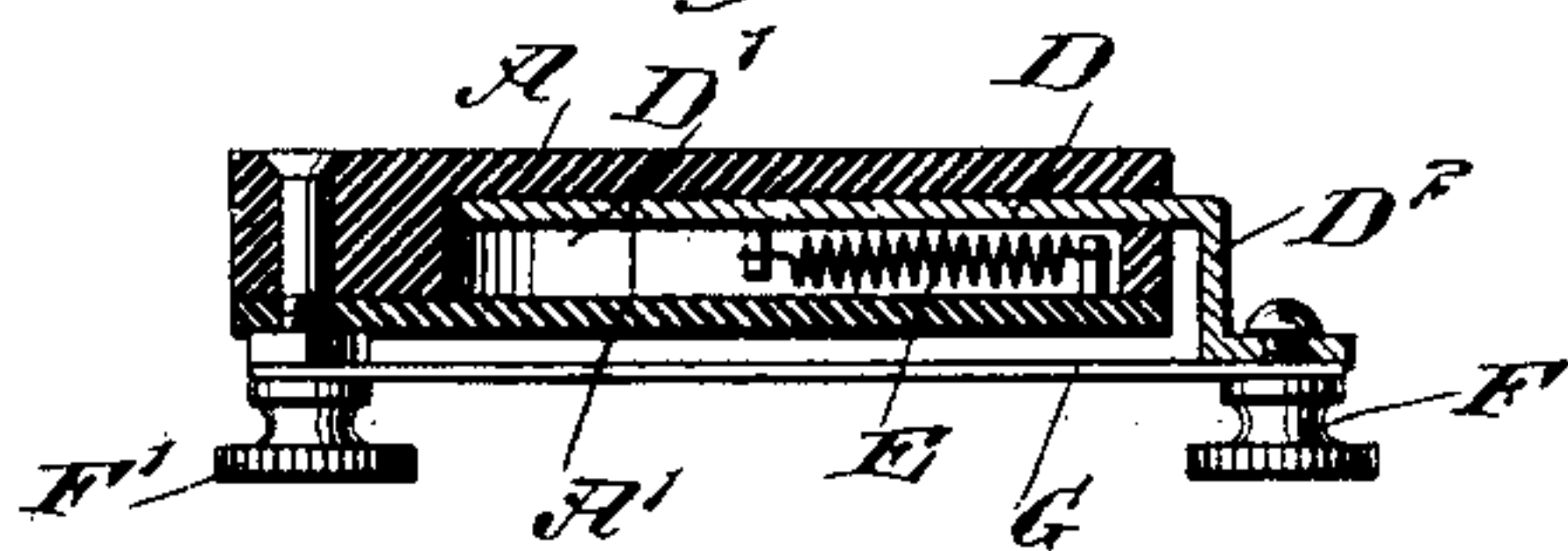


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## ELECTRIC FIRE-ALARM.

SPECIFICATION forming part of Letters Patent No. 662,719, dated November 27, 1900.

Application filed January 25, 1900. Serial No. 2,787. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES LENARD HAIGHT, a citizen of the United States, and a resident of Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and Improved Electric Fire-Alarm, of which the following is a full, clear, and exact description.

The invention relates to electric fire-alarms in which the fusion of metal at a low degree of heat releases the alarm; and the object of the invention is to provide a new and improved electric fire-alarm which is simple and durable in construction and arranged to positively insure an alarm as soon as the metal is fused by the heat emanating from the fire in the building in which the device is located.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement. Fig. 2 is an inverted plan view of the same with part of the cover of the casing broken out, and Fig. 3 is a sectional side elevation of the same on the line 3 3 in Fig. 2.

The improved electric fire-alarm is mounted in a casing A, having a removable cover A' and made of wood, hard rubber, or other suitable insulating material, and in opposite sides of the casing are arranged fixed contact-plates B B', connected at their outer ends with the circuit-wires C C' of an electric alarm of any approved construction.

The inner ends of the contact-plates B B' are beveled and placed a suitable distance apart, as is plainly illustrated in Fig. 2, and the said beveled ends are adapted to be simultaneously engaged by the wedge-shaped sides of a head D', formed on the inner end of a contact-bar D, mounted to slide longitudinally in suitable bearings in the casing A. A spring E, attached to the bar D, serves to move the head D' into circuit-closing position, as will hereinafter appear.

The contact-bar D projects through one

end of the casing A and is provided at the outer end with a flanged offset D<sup>2</sup>, carrying a binding-post F for securing one end of a wire or strip G of metal fusible at a low degree of heat, the said wire or strip G extending lengthwise of the casing a distance away from the cover A' to connect with a binding-post F', carried on the casing at or near the end opposite to the one on which the offset D<sup>2</sup> is located.

By the arrangement described a very long wire G, of fusible metal, can be employed, it being understood that the said wire normally serves to hold the bar D in an innermost position against the tension of the spring, so that the head D' is out of contact with the inner ends of the contact-plates B B'. As the wire or strip G extends free of the casing from one binding-post F to the other binding-post F', it is evident that any heat caused by a fire in the building in which the device is located has free access to the said wire, so as to readily fuse the same and release the spring-pressed bar D, so that the latter slides outward by the action of its spring E to move with the head D' in contact with the inner beveled ends of the contact-plates B B'. As soon as this takes place electric connection is established by the head D' between the contact-plates B B' and the wires C C' to close the circuit, and thus sound an alarm.

From the foregoing it is evident that the device described can be placed in an active position by the operator connecting one end of the wire G with the binding-post F' and then forcing the bar D inward to finally connect the other end of said wire or strip G to the binding-post F, so as to hold the bar D against the tension of the spring E, with the head D' out of contact with the contact-plates B B'.

The device is very simple and durable in construction, can be cheaply manufactured, and in case the wire or strip G is broken by fusion it can be replaced by another wire to render the device as good as new and ready for action in the building.

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

1. An electric-circuit closer, comprising a casing, contact-plates held in said casing and



spaced apart, the said plates being connected with the circuit-wires of an alarm, a contact-bar mounted to slide in the casing, the outer end of said bar having a flanged offset, a  
5 spring for moving said bar into engagement with the contact-plates, a binding-post secured to the offset of the bar, a binding-post secured to the casing, and a fusible connection between the two binding-posts normally  
10 holding the bar out of contact with the plates, substantially as specified.

2. An electric-circuit closer, comprising a casing of insulating material, contact-plates held in said casing and having their inner  
15 ends beveled and spaced apart, and the outer ends connected to the circuit-wires of an alarm, a contact-bar mounted to slide longitudinally in the casing, and provided at its inner end with a head adapted to engage said

beveled ends, the outer end of said bar having a flanged offset, a spring for moving said bar into engagement with the contact-plates, binding-posts, one of which is secured to the casing and the other is secured to said flanged offset, and a piece of fusible metal adapted  
25 to be secured to said binding-posts, to hold the contact-bar against the tension of its spring and its head out of engagement with the contact-plates, substantially as shown and described. 30

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

CHARLES LENARD HAIGHT.

Witnesses:

CHARLES QUICK,  
HARRY E. ANDERSON.