(No Model.)

E. WESTON.

SAFETY DEVICE FOR ELECTRIC CIRCUITS.

No. 302,968. Patented Aug. 5, 1884.

Fig. 1.

Fig. 2.

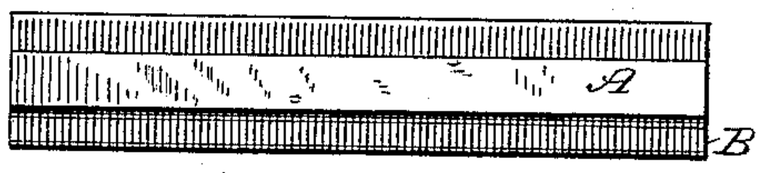
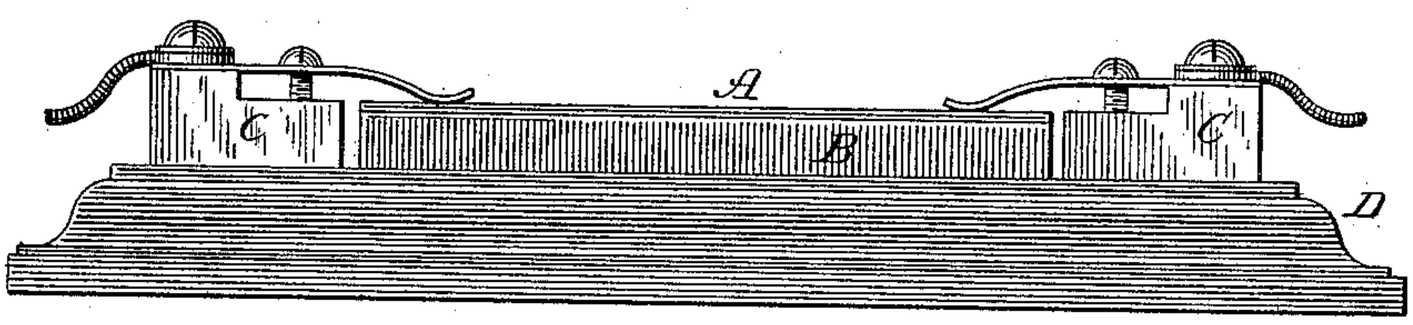


Fig. 3.



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UNITED STATES PATENT OFFICE.

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SAFETY DEVICE FOR ELECTRIC CIRCUITS.

SPECIFICATION forming part of Letters Patent No. 302,968, dated August 5, 1884.

Application filed February 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WESTON, a subject of the Queen of Great Britain, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Safety Devices for Electric Circuits, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

In United States Patent No. 259,614, granted to me, I have shown a safety device for electric circuits, consisting of a strip of a highly-fusible metal, which is included in a circuit, or any branch thereof, and which has a relatively higher specific resistance than the remainder of the circuit with which it is connected. The object in inserting these strips is to break the continuity of the circuit by the fusion of the strip when the amount of current passing over the circuit exceeds a certain limit. Another object and a great advantage is gained by making the strips of a metal which fuses at a temperature below the ignition-point of wood, paper, fabrics, or other like combustibles; but inasmuch as metals or alloys which fuse under these conditions are quite soft, and often brittle, considerable care is required in their manipulation—as, for instance, in inserting them in the spring-jaws arranged for connecting them with the circuit. To avoid this objection I employ, in conjunction with the fusible strips, one or more strips of a stiffer or stronger material, composed of an insulating substance or insulated from the fusible strips. The latter, when re-enforced in this manner, are more easily transported and handled, and may be removed from or inserted in the retaining devices provided for them with greater ease and with more perfect assurance of good electrical contact. The re-enforcing strips may be of any substance that will increase the strength or rigidity of the fusible strip—as, for instance, wood, paper, asbestus, or even metal, if care be taken that it is insulated in such manner that it can never form part of the circuit—and they may be applied to one or more faces of the fusible strip and secured thereto in any way desired. In the drawings I have shown a fusible strip re-enforced in this manner.

Figure 1 is a side view, and Fig. 2 a plan view, of a fusible strip attached to a strip or block of insulating material; and Fig. 3, a side view of the same in combination with retaining-clamps of ordinary construction.

A designates a ribbon, wire, or strip of fusible material of any proper kind to serve as a safety device in an electric circuit, and B a strip, plate, or block of any of the materials above named, or their equivalents, to which the strip A is attached. The strip A may be made to adhere to the re-enforcing strip by glue, varnish, or the like, or may be pinned or similarly attached. It may be wider, or narrower, or of the same width as the re-enforcing strip, and may overlap the ends. When these strips are to be used, it is usual to provide spring clamping-jaws, as C C, on an ordinary base, as D, the jaws forming the terminals of a severed circuit. The fusible strips are included in the circuit by being passed under the springs, as shown in Fig. 3. It will be seen that when the strips are re-enforced, as described, this is readily accomplished. Any other suitable means may be employed for inserting the strips in circuit.

In my former patent alluded to I have described a plan for preventing the molten globules from dropping when the strips A are fused, by attaching the latter to the wooden or insulating base D by a material such as shellac. In the present invention this result may also be attained with the additional advantages set forth.

What I claim is—

1. As an article of manufacture, a re-enforced fusible or safety strip for electric circuits, substantially as hereinbefore described.

2. A fusible or safety strip and re-enforcing insulating-strip, in combination with clamping-jaws or equivalent devices, forming the terminals of a divided circuit, and adapted to receive and retain the strips, in substantially the manner set forth.

In testimony whereof I have hereunto set my hand this 2d day of February, 1883.

EDWARD WESTON.

Witnesses:
HENRY A. BECKMEYER,
ALEX. P. WRIGHT.