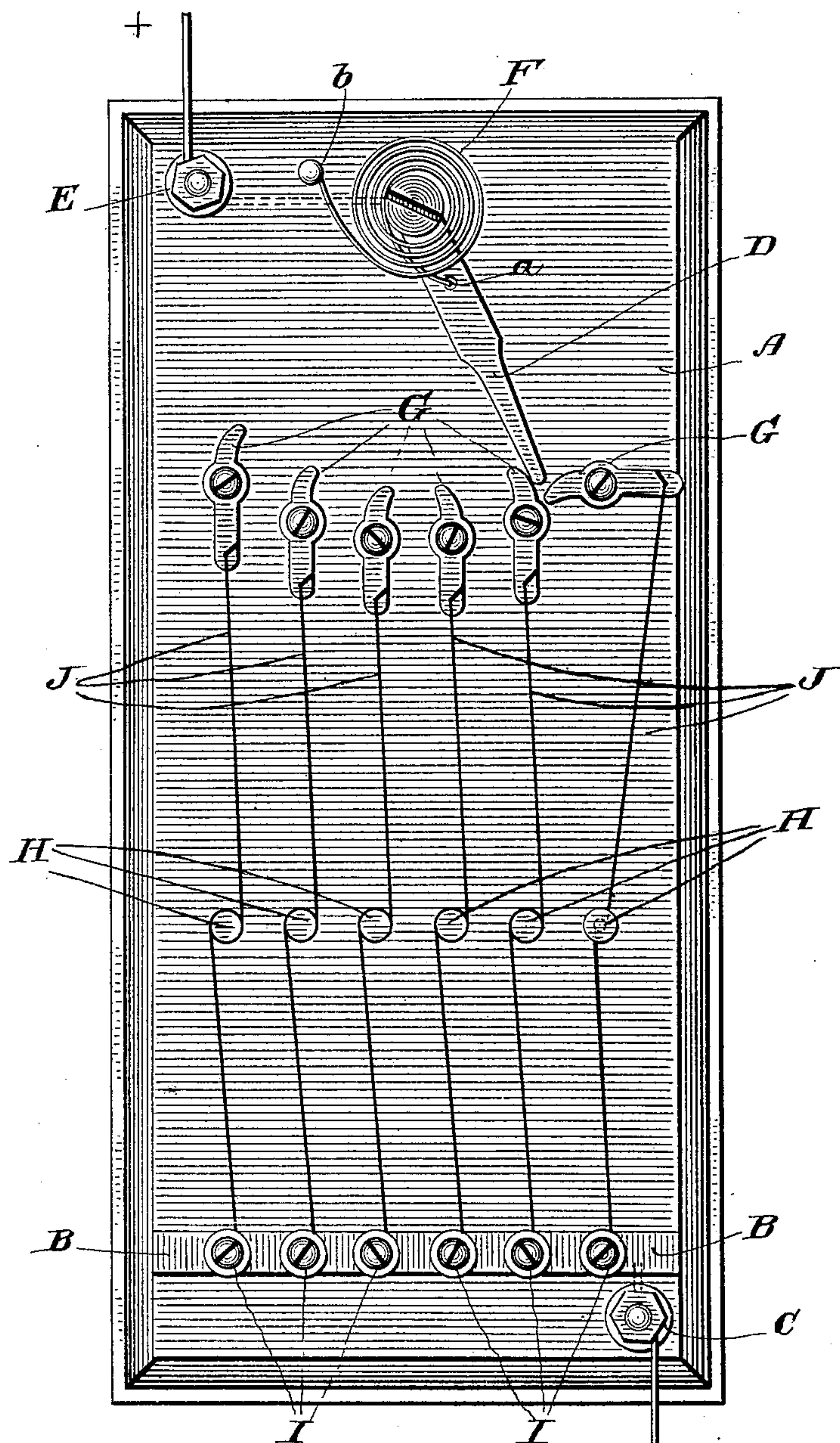


(No Model.)

L. B. FAVOR.
MULTIPLE FUSE BLOCK.

No. 452,875.

Patented May 26, 1891.



WITNESSES:

J. F. Hinch.
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LORENZO B. FAVOR, OF GLOUCESTER, MASSACHUSETTS, ASSIGNOR TO THE
THERMAL ELECTRIC COMPANY, OF SAME PLACE.

MULTIPLE FUSE-BLOCK.

SPECIFICATION forming part of Letters Patent No. 452,875, dated May 26, 1891.

Application filed November 3, 1890. Serial No. 370,098. (No model.)

To all whom it may concern:

Be it known that I, LORENZO B. FAVOR, a citizen of the United States, residing at Gloucester, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Thermal Cut-Outs—Electrical; 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.

My invention has reference to certain new and useful improvements in the construction of devices known as "thermal cut-outs," and has for its object to improve upon the construction shown and described in Letters Patent No. 431,186, issued to me July 1, 1890.

The accompanying drawing shows a plan view of my improvement.

A is a base made from any suitable non-conducting material, and B is a conducting-bar secured to said base and electrically connected with one of the line-wire binding-posts C.

D is a spring-actuated finger pivoted on the base and electrically connected with the other line-wire binding-post E. The spring action is imparted to the finger by means of a volute spring F, one end of which is secured to the finger, as seen at *a*, the other end engaging a pin *b*, projecting from the base A.

G are contact-dogs pivoted independent of each other to the base and whose noses extend normally in the arc of a circle for the purpose presently explained.

H are fusible plugs inserted within holes in the base and composed of some such material as spermaceti, paraffine, or sealing-wax, that fuses readily at from 120° to 136° Fahrenheit.

I are binding-screws on the bar B. The tails of the dogs G are connected to the binding-screws I by wires J, which latter are given a turn around the plugs H and fastened at a tension to the bar B by means of said screws. The tension of the wires holds the dogs in a position to afford resistance to the spring-finger, as shown in the instance of the five dogs at the left of the drawing.

When a current of an intensity of at least sixty-five one-hundredths of an ampère gets

in the circuit, whether from lightning, electric-lighting wires, or otherwise, the plug in circuit will fuse, and the wire around the same will become slack and will no longer afford a resistance to the finger. The latter will therefore swing against the next dog and close the circuit. In the instance of the tension-wire at the right of the drawing I have shown the effect caused by the fusing of the plug.

Frequently, and in fact usually, the finger will pass by the dog before the plug has fused entirely through; but it sometimes happens that the plug is entirely cut off by the contraction of the wire when heated by the electric current.

In my above-mentioned patented improvement I employ fusible wires, but their strength is so little that they frequently become broken accidentally, and moreover the substitution of new wires for those that have become broken or fused is a delicate and somewhat tedious operation.

In my present application the wires are not fusible, but are strong enough to stand usage without breaking, and in re-establishing a fused connection it is merely necessary to substitute new plugs for those that have been fused.

Of course it will be seen that my invention resides in the broad idea of keeping the dogs in a normal position to bar the progress of the finger by means of wires drawn at a tension and fusible plugs against which said tension is exerted, and therefore it is not necessary that the exact relative position of the plugs and wires shown should be preserved, since the purpose and result of my invention will be subserved as long as the plug is interposed as a resistance to the tensile strain of the wire.

I claim—

1. In a thermal cut-out, the combination, with the spring-actuated finger and the conductor-bar insulated from each other and electrically connected with the respective ends of the line-wire, of the pivoted contact-dogs insulated from each other, the tension-wires connecting said dogs with the said bar, and fusible plugs of paraffine, spermaceti, or the like interposed as a resistance to the tension of said wires, substantially as set forth.

2. In a thermal cut-out, the combination
of the non-conducting base, the spring-actu-
ated finger, and the conductor-bar secured to
said base and electrically connected to the
5 respective ends of the line-wire, the contact-
dogs pivoted independently to said base, the
fusible plugs projecting from said base, and
the non-fusible wires around said plugs and

secured at a tension to said dogs and conduct-
or-bar, substantially as shown and described. 10

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

LORENZO B. FAVOR.

Witnesses:

BENJ. H. CORLISS, Jr.,

RICHARD C. STEELE.