No. 705,424. Patented July 22, 1902.

E. W. MÜLLER.

ELECTRICAL PANEL BOARD ATTACHMENT.

(Application filed Mar. 12, 1902.)

(No Model.)

Fig. 1.

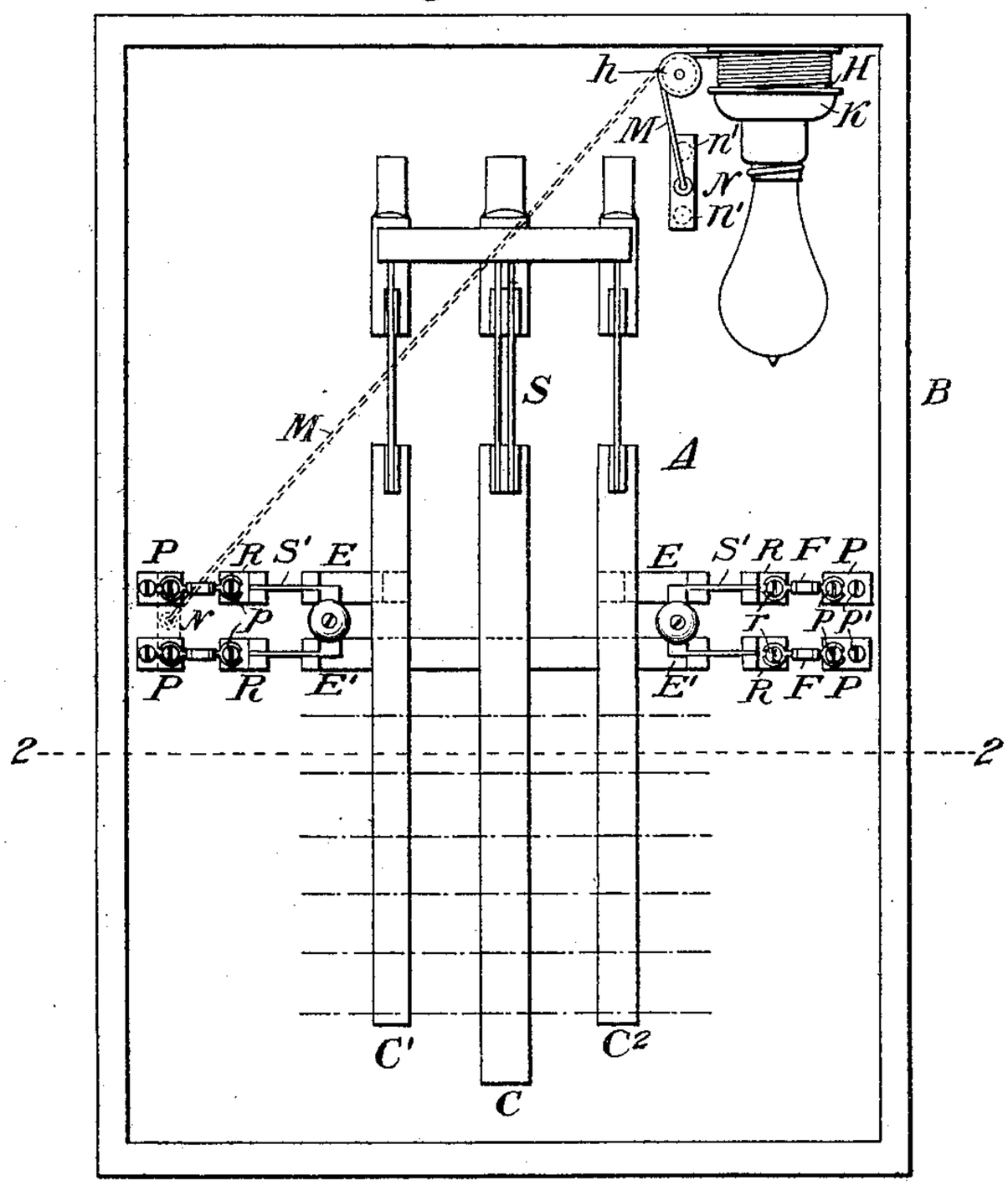


Fig. 2.

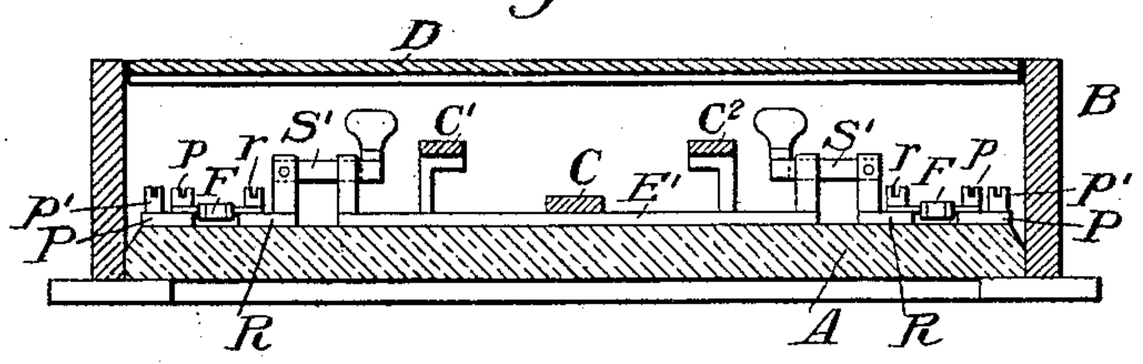
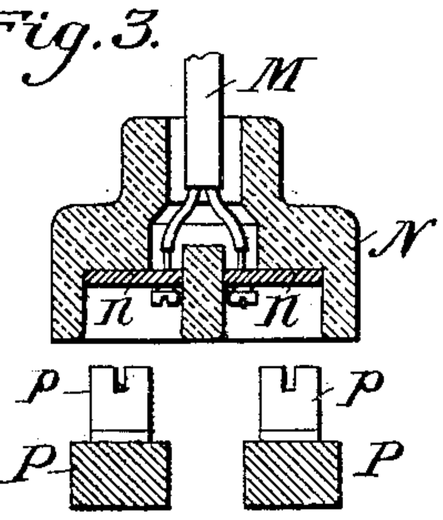


Fig. 3.



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UNITED STATES PATENT OFFICE.

ERNEST W. MÜLLER, OF BROOKLYN, NEW YORK, ASSIGNOR TO HUBERT KRANTZ, OF BROOKLYN, NEW YORK.

ELECTRICAL-PANEL-BOARD ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 705,424, dated July 22, 1902.

Application filed March 12, 1902. Serial No. 97,951. (No model.)

To all whom it may concern:

Be it known that I, ERNEST W. MÜLLER, a citizen of the United States of America, residing in the borough of Brooklyn, county of Kings, State of New York, have invented an Electrical-Panel-Board Attachment, of which the following is a specification.

The main object of my invention is to provide electrical panel-boards or switchboards with an attachment whereby the blowing out of a concealed fuse can be readily detected.

The use of concealed or covered fuses is becoming a standard requirement; but it is attended with the difficulty that the blowing out of the fuse cannot be easily detected or located unless special means be provided for that purpose. In panel-boards in buildings and other structures an incandescent electric lamp is commonly provided for connection with the lighting-circuit to give light when desired at night or when the panel-board is located in a dark place. I provide means whereby this lamp may be availed of to test the circuits for blown fuses.

In the accompanying drawings, Figure 1 is a face view of a panel-board provided with my invention, the door or cover plate being removed. Fig. 2 is a sectional view on the line 2 2, Fig 1; and Fig. 3 is an enlarged view of a part.

It will be understood that my invention may be applied to any desired form, construction, or arrangement of panel-board or switchboard and that illustrated is shown only by way of example.

In the construction illustrated, A is the insulating back plate, B the side walls, and D the door or cover, Fig. 2. C C′ C² are the bus-bars of a three-wire system with a jack-switch S, and E E′ the cross-bars with switches S′. Between the terminal plates R of each switch and the plates P are the concealed or cartridge fuses F, of any suitable construction. These fuses are connected up to the binding-posts r on the plates R and the posts p on the plates P. The branch wires are to be connected up to the posts p' on the plates P, as usual. In the drawings I have illustrated in full lines only two cross-bars and their switches and connections; but the positions of others are indicated by the dot-and-dash lines, as will be understood. To the terminals of the socket k, which carries the lamp K, I connect up a pair of insulated flexible conductors (in the usual single-cord form) M, and I connect the other ends of these conductors to contact-plates n n in a contact-plug N, of insulating material, Figs. 1 and 3. These contact-plates are preferably set in recesses in the plug N, as shown, for example, in Fig. 3, and the contact-plates and recesses are so spaced that the plug can be conveniently fitted over a pair of binding-posts p p or p' p', as indicated by dotted lines in Fig. 1, to bring the plates n n into contact with the posts, and so close that branch circuit through and light the lamp if the concealed fuses F are intact in the branch circuit thus being tested.

When the lamp is to be lighted merely for the purpose of furnishing light and not for testing the circuits, the plug N is fitted to a special pair of contacts n' n' on the back board and in the circuit, Fig. 1.

Instead of having the cord M hanging in a loose loop between the lamp-socket and the plug N, I prefer to coil it on a spring-actuated rotary drum H, mounted around the base of the lamp-socket, so that the cord can be drawn off or unwound against the action of the spring to fit the plug N to any of the pairs of binding-posts; but the spring will recoil the cord when the plug is put back to its normal position on the posts n'. It is preferable in this case to run the cord over an idler-pulley h.

I claim as my invention—

1. A panel-board, having circuits and concealed fuses therein with an electric lamp, flexible conductors therefrom and a contact-plug on the conductors, adapted to be applied to the binding-posts of the said circuits to test the fuses, substantially as described.

2. A panel-board, having bus-bars, cross-bars, switches and concealed fuses in the cross-bar circuits with an electric lamp, flexible conductors therefrom and a contact-plug adapted to contact with exposed parts of the branch circuits beyond the fuses, substantially as described.

3. A panel-board having concealed fuses in its branch circuits and binding-posts in the

circuits beyond the fuses, with a lamp fixed to the panel-board, flexible conductors connected up to the lamp-terminals and having at their other ends a contact-plug adapted to fit over the binding-posts in any of the branch circuits.

4. A panel-board having concealed fuses in its branch circuits with a lamp fixed to the panel, a spring-drum, flexible conductors wound on the drum and in connection with the lamp-terminals, a contact-plug connected to the other ends of the conductors and adapted to contact with exposed parts of the branch circuits beyond the fuses, substantially as described.

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

ERNEST W. MÜLLER.

Witnesses:
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