Feb. 7, 1933. M. BRUNO 1,896,218

SIGNAL INDICATING SYSTEM

Filed April 1, 1931

Fig. 1.

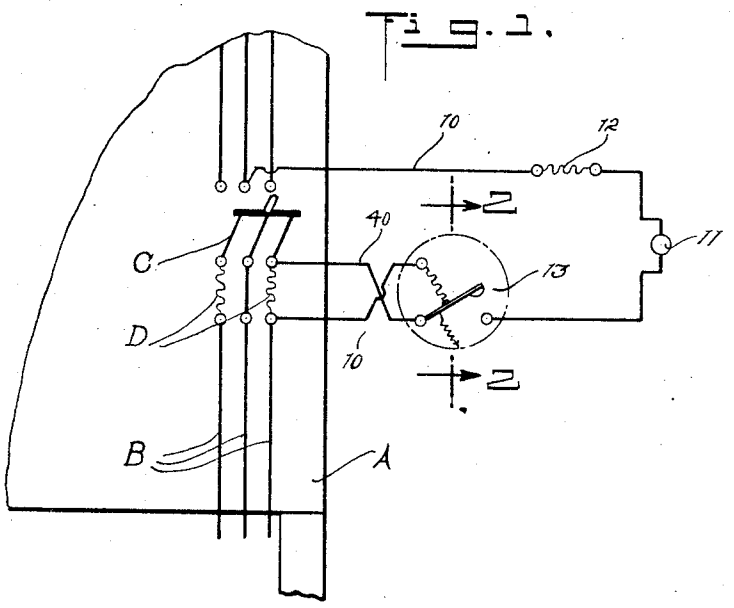
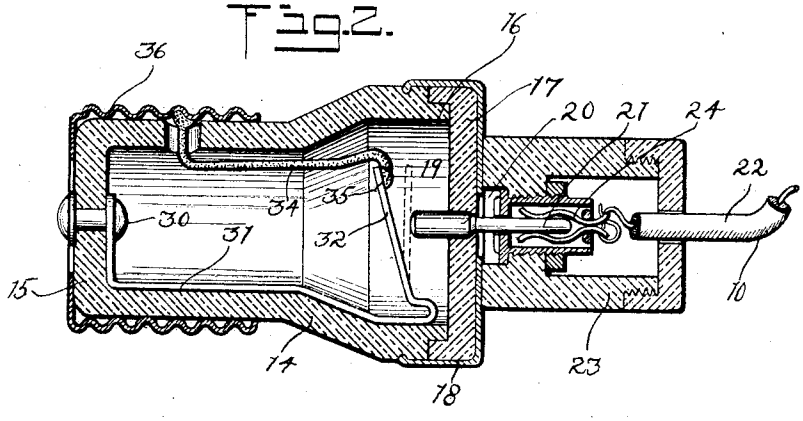


Fig. 2.



Inventor

MARIANO BRUNO

By Clarence A. O'Brien

Attorney

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MARIANO BRUNO, OF BROOKLYN, NEW YORK

SIGNAL INDICATING SYSTEM

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This invention relates to signals, indicating systems or the like, and more particularly it pertains to means for indicating certain electrical operations.

In electrical installations where numerous electrical circuits are carried by a switch board a fuse or fusible switch is included in each circuit to protect the circuit against damage by heavy loads which may from time to time be imposed thereon. In large installations where there are many circuits and many fuses, it is difficult to determine which of the several fusible devices has been operated, and it is the main object of this invention to provide novel means whereby the operated fuse may be identified at a glance.

With the above and other objects in view, the nature of which will be readily understood as the description of the invention proceeds, reference will be had to the accompanying drawing, wherein;

Figure 1 is a diagrammatic view illustrating a device constructed in accordance with the present invention and its manner of use, and;

Figure 2 is a longitudinal sectional view taken through a plug switch constructed in accordance with the present invention.

Referring particularly to Figure 1 of the drawing, the reference numeral A designates a switch board and B designates the line carried thereby. The line is interrupted by a three pole switch C and mounted in the line, there are suitable protection fuses D of the high amperage type. Leading from the main line B, there is a circuit designated 10 and in said circuit, there is a signal 11 which may be in the form of a light, a bell, or other suitable signal. In this circuit 10, there is a low amperage fuse 12 protecting said light, bell or other suitable signal. The circuit 10 is normally maintained open, and is closed by a suitable switch 13 the construction of which and the manner of operation of which will be hereinafter more specifically described.

Referring to Figure 2, it will be noted that the switch 13 is of the plug type and comprises a hollow body portion 14 having a closed end 15 and an open end 16 which latter is adapted to be closed by means of a cap or the like 17. The cap 17 may be held on by means of a spring cap bail or the like 18 as illustrated in Figure 2. The cap 17 carries a contact member 19 in the form of a pin or the like 20 which protrudes as at 21 from the cap 17. A conductor 22 which forms a portion of the circuit 10 is adapted to be connected to the contact member 19 and for this purpose, a housing member 23 is employed. The conductor 22 leads into the housing 23 and is provided with spring fingers or the like 24 by means of which electrical connection between the conductor 22 and the contact member 19 may be made by reason of engagement of the spring members 24 with the pin 20 in the manner illustrated.

The closed end of the body portion 14 carries a contact member 30 preferably in the form of a rivet and this contact member also provides means for securing a metallic conductor 31 within the housing. The metallic conductor 31 has a resilient extremity 32 which although normally held out of engagement with the contact 19, is adapted to engage the same under certain operating conditions and complete an electrical circuit between said contact 19 and the contact 30. The resilient member 32 is normally held out of engagement with the contact member 19 by means of a fusible element 34 one end of which is connected as at 35 to the free end of the resilient member 32 and the other end of which is connected to a shell or the like 36 surrounding the closed end of the body member 14.

This device is adapted to be inserted into a standard plug socket the terminals of which are suitably connected to the line B as illustrated in the diagram.

With the parts in this position, it will be apparent that the circuit 10 is normally open even though the switch C be closed. Upon the line B being subjected to heavy load, one of the fuses D will be "blown". When the fuse D "blows", the current is passed through the fusible member 34 by means of a conductor 40, "blows" the same and releases the resilient end 32 of the member 31 and permits of its movement under its own resiliency into engagement with the contact member 19.

Engagement of the contact member 19 by the member 32 closes the circuit 10 and operates the signal 11 thus indicating which of the lines has been interrupted by a "blowing" of its fuse.

Thus it will be apparent that the present invention provides a new and novel indicating means whereby the "blowing" of a fuse of a main line may be readily determined merely by examination of the switch board.

While the invention has been herein illustrated in a preferred form, it is to be understood that the invention is not to be limited to the specific construction herein illustrated and that it may be practiced in other forms without departing from the spirit thereof.

Having thus described the invention, what is claimed as new, and what it is desired to secure by Letters Patent of the United States, is:

A plug switch of the class described, comprising, a hollow body having an open and a closed end, an electrical contact on the outer side portion of said body, an electrical contact in the closed end of said body, a resilient electrical conductor connected to said contact on the closed end of said body, a cover for said body having a contact tube therein, adapted to project into said body and contact said resilient electrical contact member, fusible means electrically connected to the electrical contact on the outer side of said body, and normally maintaining said resilient contact out of electrically contacting engagement with the pin, and means for securing said tap to said body.

In testimony whereof I affix my signature.

MARIANO BRUNO.