July 23, 1935. F. SAAR 2,009,071

POWER SUPPLY CIRCUIT

Filed April 13, 1933

Fig. 1

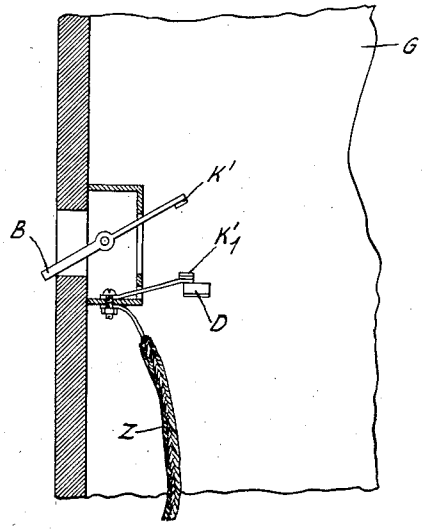
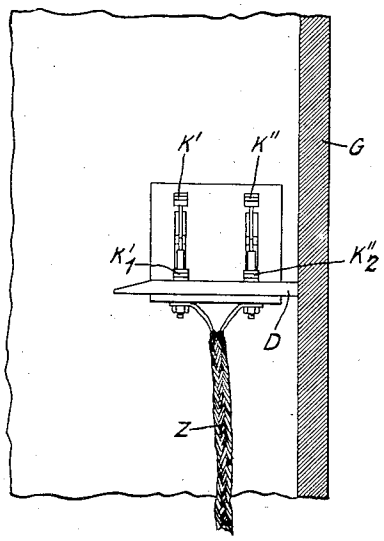


Fig. 2



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POWER SUPPLY CIRCUIT

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1 Claim. (Cl. 250—27)

The present invention relates to power supply circuits, in particular power supply circuits for radio sets and the like. For such arrangements provisions are made so as to remove the voltage from the inner circuit elements enclosed within an outer casing or cabinet as soon as the casing is opened as when it is desired to change an amplifier tube or any other circuit element. In the customary arrangements a special switch is provided for this purpose in addition to operating "on" and "off" switch for the apparatus. The special switch acts upon opening of the protective casing or cabinet to interrupt the current supply line and thus leave the apparatus without current even though the operating switch may be turned on. In this way the danger of electrical shocks is eliminated.

The present invention describes an improvement for such apparatus. According to the invention the apparatus is provided with one switch only whose contact halves are movable relative to each other both by the handle of the "on and off" switch and by means of an interrupting member acting during the opening of the protective cover or cabinet. The advantage obtained by the present invention resides in the fact that the apparatus requires only the one switch which is used for the general operation of the set as well as for interrupting the voltage supply during the opening of the protective cover, a measure necessary for the sake of safety.

An embodiment of the invention is shown in the drawing by way of example.

In the drawing Figure 1 illustrates an end view of a preferred form of the invention wherein the safety switch device cooperates with the "on" and "off" switch of an amplifier; and,

Figure 2 is a back view of the device shown in Figure 1.

Z designates the supply lead, G is the casing or cabinet of the apparatus. The switch provided is a double pole switch comprising two contact halves K', K'' connected with the operating handle B (see Figure 1) as well as two contact springs K'_1, K''_2. The latter are operated by an interrupting member connected with the removable portion of the cabinet as for instance the rear of the cabinet or protective casing G. In its simplest embodiment this interrupting member may consist of a rod D of insulating material and acts to displace the contacts into a position in which closing with the other switch halves is possible only when the protective casing is in the proper position. Instead of making the rod D of insulating material it is also possible to use a metallic interrupting member which rests against corresponding insulating plates at the contact springs.

It will be seen from considering the drawing that if the removable portion G of the cabinet is removed, say for the purpose of replacing a worn out tube, the rod D which is attached to the removable portion G will be pulled out along with the removable panel. When this happens the spring contacts K'_1 and K''_2 will drop down out of range of the top contacts so that even if the "on" and "off" switch B is operated to turn the power on, it is impossible for the contacts K' and K'' to contact with the spring contacts K'_1 and K''_2 respectively. It is obvious that if the "on" and "off" switch B is in the "on" position, contact will be broken when the removable portion G is taken out. The rod D is shaped so as to facilitate operating the two lower spring contacts when the portion G of the cabinet is in its proper position. For this purpose it will be noted that the rod D is tapered toward the outer end thereof.

I claim:

In amplifying apparatus and the like of the type provided with a protective casing having a section thereof displaceable for opening the casing so as to permit access to the apparatus and with means for energizing the amplifying apparatus by connection thereof to a source of energizing potential, an "on" and "off" switch for connecting and disconnecting the apparatus to the energizing source, means cooperating with the displaceable section of the casing for rendering the switch inoperative to connect the apparatus to the source when the casing is open said "on" and "off" switch including at least two cooperating contacts adapted to contact with one another to close the energizing circuit, both of said two cooperating contacts being movable with respect to the casing, one thereof being manually operable, the displaceable section of the casing being provided with means cooperating with the other of said contacts for shifting said other contact from its normal position in a direction to prevent the two contacts closing the circuit between the apparatus and the power source when the casing is opened.

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