CONTROL SWITCH FOR THE A BATTERIES OF RADIO RECEIVING SETS

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Inventor

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The present invention appertains to a switch designed to be mounted in a room or the-like flush with the wall and has for its principal object to provide a device of this nature which may control the connection of the battery with the filament circuit of a radio receiving set and the connection of the A battery with a charger.

Another important object of the invention is to provide a switch of this nature which is convenient to operate, one which possesses a simple structure, is strong and durable, and otherwise well adapted to the purpose for which it is designed.

With the above and numerous other objects in view as will appear as the description proceeds, the invention resides in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter more fully described and claimed.

In the drawing—

Fig. 1 is a sectional view through the switch embodying the features of my invention.

Fig. 2 is another sectional view there-through, taken at right angles to that shown in Fig. 1, and

Fig. 3 is a diagrammatic view showing the circuit closer with an A battery, a charger, and a radio receiving set.

Referring to the drawing in detail, it will be seen that I designates a rectangular shaped casing of insulating material having a bottom 2, a top 3. The top 3 is provided with an elongated longitudinally extending slot 4. Plates 5 and 6 are disposed on the top 3 in any suitable manner and are provided with slots 7 and 8 respectively registering with slot 4. A bracket 9 is mounted on the bottom 2 and an arm of insulating material as at 10 is pivoted at one end thereof and extends through the slots 4, 7 and 8 and terminates in a knob 11. On each side 12 of the casing, interiorly thereof, there is disposed three curved contacts 13 which are secured in place by terminals 14 extending through the side of the casing and terminating exteriorly thereof. The series of contacts 13 are aligned radially from the fulcrum end of the arm 10. This arm 10 is provided with three contacts 15 formed of sleeves so that when said arm 10 is swung so that contacts 15 engage with contacts 13 on one side, they will also be engaged with the other contacts 13 on the other side 12.

A second series of contacts 16 is mounted on each side 12. This second series consists of two contacts which are radially aligned with the fulcrum of the arm 10.

It will be seen that when the arm 10 is swung so that two of its contacts 15 engage the contacts 16 on one side thereof, these contacts 15 will also engage the contacts 16 on the other side 12. The contacts 16 are similar to but curved in opposite directions from contacts 13 and are secured in place by terminals 17 which terminate exteriorly of the casing.

It is to be noted that when the arm 10 abuts the ends of the slots 4, 7 and 8 adjacent one end of the casing, that its contacts 15 are in engagement with contacts 13 and when swung to engage the ends of the slots 4, 7 and 8 at the other end of the casing, its contacts are in engagement between contacts 16.

In order to understand the advantages of this switch I have disclosed an example of its utility in Fig. 3, the parts being shown diagrammatically. The radio receiving set is indicated at R and the leads from the filament circuit by numerals 20 and 21. These preferably pass through a plug P and engage with the contacts 16 on one side 12 through the terminals 17. The charger is indicated by the letter C and the A battery of the storage battery, by the letter A. A wire 22 connects the terminal of the A battery with the upper terminal 14 on one side 12 of the casing 1.

A wire 23 connects the positive terminal of the A battery to the intermediate terminal 14 on the same side of the casing. One lead from a source of electrical energy as at 24, is connected to the bottom terminal 14 on the same side of the casing. The other lead 25 from the source of electrical energy is connected to the charger. A wire 26 connects the charger at its other terminal 27.

This wire 26 is attached to the bottom terminal 14 on the other side of the casing a wire 29 connects the positive output terminal 28 of the charger with the terminal 14 on the latter mentioned side of the casing while a wire 30 connects the minus output terminal 29 with the top terminal 24 on its last mentioned side of the casing.

It will thus be seen that wires 26 and 29 and 30 are connected to terminals 14 on the same side of the casing as the leads 20 and 21 are connected to the terminals 17. A wire 22
connects the top terminal 17 on the first mentioned side of the casing with the top terminals 14 on the same side, and a wire 33 connects the terminals 17 on the side of the casing just mentioned with the intermediate terminals 14 on the same side.

When it is desired to complete the filament circuit of the radio receiving set R, the switch arm 10 is swung so as to be disposed between contacts 16 whereby the current may flow from the A battery, through wires 23, wire 33, contacts 16 at the bottom of the casing, lead 21, through the filament, and returned through wire 20, the upper contacts 16, wire 32, and wire 22 to the A battery.

If it is desired to charge the A battery, the arm 10 is swung into engagement with contacts 13 thereby connecting the charger with the power line whereby the current may flow from lead 24, through contacts 13 at the bottom of the casing, through wire 26, through the charger, and returned through wire 25. The charging or output current of the charger C will flow through wire 29, through the intermediate contacts 13, through wire 23, through the A battery A, and returned through wire 22, top contacts 13 and the wire 30 to the charger.

These circuits, of course, have been followed merely to illustrate an operative connection which may be used, but it is to be understood that numerous other circuit arrangements may be used to advantage as will be apparent to those skilled in this art.

It is further apparent that numerous changes in the details of construction and in the combination and arrangement of parts of the switch may be resorted to without departing from the spirit or scope of the invention as hereinafter claimed, or sacrificing any of its advantages.

Having thus described my invention, what I claim as new is:

1. A switch apparatus of the class described including a casing having its upper wall provided with a slot, an arm pivoted at its end to the lower wall so as to extend through the slot, a series of contacts on each side wall of the casing alined between one end of the slot and the fulcrum of the arm, a second series of contacts on each side alined with the other end of the slot and fulcrum of the arm, and spaced contacts on the arm adapted to be engaged between either of the aforementioned series of contacts.

2. A switch apparatus of the class described including a casing having its upper wall provided with a slot, an arm pivoted at its end to the lower wall so as to extend through the slot, a series of contacts on each side wall of the casing alined between one end of the slot and the fulcrum of the arm, a second series of contacts on each side alined with the other end of the slot and fulcrum of the arm, spaced contacts on the arm adapted to be engaged between either of the aforementioned series of contacts, the first mentioned contacts being accurately curved and having one end fixed to the casing.

3. A switch apparatus of the class described including a casing having its upper wall provided with a slot, an arm pivoted at its end to the lower wall so as to extend through the slot, a series of contacts on each side wall of the casing alined between one end of the slot and the fulcrum of the arm, a second series of contacts on each side alined with the other end of the slot and fulcrum of the arm, spaced contacts on the arm adapted to be engaged between either of the aforementioned series of contacts, the first mentioned contacts being accurately curved and having one end fixed to the casing, oppositely to those of the second series.

In testimony whereof I affix my signature.

LEMUEL H. SMILEY.