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P. O'SULLIVAN

RADIO ACCESSORY

Filed Sept. 10, 1925

Fig. 1

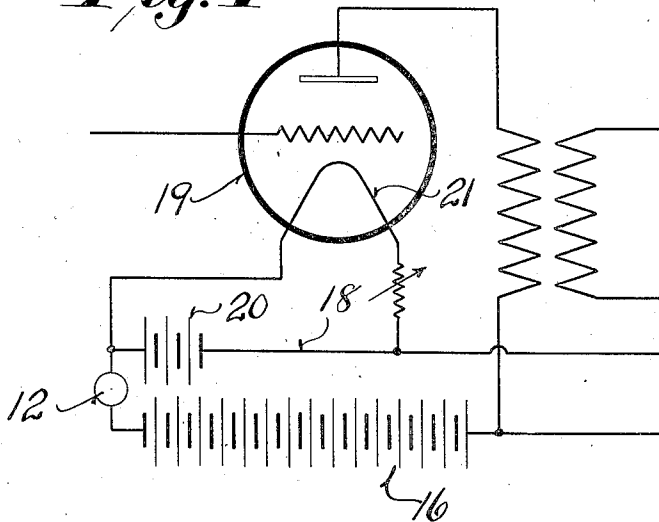


Fig. 2

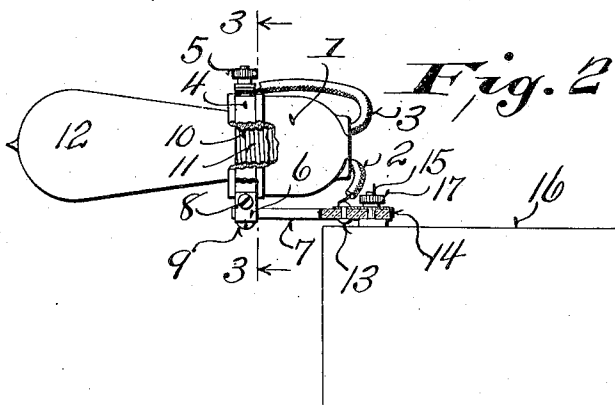
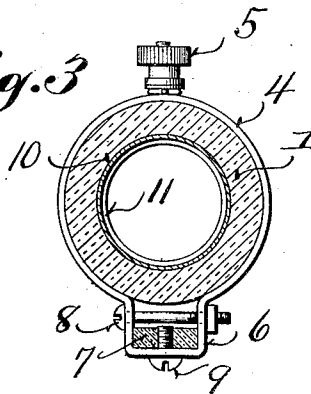


Fig. 3



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RADIO ACCESSORY.

Application filed September 10, 1925. Serial No. 55,539.

This invention relates to wireless or radio accessories.

In wireless sets as heretofore constructed, it has frequently happened that the full voltage of the high voltage batteries commonly known as B batteries have been impressed accidentally upon the filament of the tubes with the result that the filament is immediately burned out. Further, in making connections and altering or adjusting the sets, it frequently happens that the B batteries are short circuited through other portions of the apparatus, thus damaging both the B batteries and the apparatus.

This invention provides an accessory for wireless sets which guards against the accidents enumerated above, and objects of such invention are, therefore, to provide a device which will fully protect the filaments of tubes and other wireless apparatus from inadvertent damage from the B batteries, and which also will protect the B batteries themselves in case of short circuit, and prevent an excessive flow of current there-through.

Further objects are to provide an attachment for the B batteries which will give a visible signal when an unusual current flow occurs, and which will not interfere with the normal action of the wireless apparatus.

Further objects are to provide a device adapted for attachment to the conventional B batteries in a simple and easy manner, and to provide a device which may be readily renewed as needed, and which is inexpensive and does not take up much room.

An embodiment of the invention is shown in the accompanying drawings, in which:—

Figure 1 is a diagrammatic view showing the position of the apparatus in a wireless system.

Figure 2 is a view partly in section showing the device in position.

Figure 3 is an enlarged transverse sectional view on the line 3—3 of Figure 2.

The device comprises a lamp socket 1 which is formed of insulating material and which has the leads 2 and 3 projecting therefrom, as shown in Figure 2. This socket is provided with an external channel within which a metal band 4 is seated. Such band carries a binding post 5 beneath which the end of one of the leads, for instance, the lead 3, is secured. This metal

band is provided with a channel portion 6 on its lower side which receives an insulating supporting bar 7 of rectangular shape. A clamping bolt 8 passes through the downturned portion and clamps the bar rigidly in place. Further, it is preferable to provide a screw 9 which extends through the strap or band 4 and into the bar 7, as shown most clearly in Figure 3. The socket 1 is provided with the usual threaded sleeve or shell 10 within which the threaded base 11 of a lamp 12 is screwed. This lamp is preferably of small voltage, for example a 10 w. 110 v. lamp has been found satisfactory.

The other lead 2 is secured by means of a rivet or suitable member 13 to a metal plate 14 carried by the outer end of the supporting insulating bar 7, the rivet 13 also holding the plate in position. An aperture extends through the plate and through the bar and is adapted to receive the binding post 15 of the battery.

Thus the terminal of the B battery 16 is electrically and mechanically connected to the lamp and the parts are rigidly held in place by screwing the thumb nut 17 of the battery in place, as shown in Figure 2. The appropriate portion of the wireless system is connected to the terminal 5 in place of the binding post 15 of the B battery. As shown in Figure 1, the lamp 12 is connected between the B batteries and one of the main bus bars 18 of the wireless system, such system being provided with the usual vacuum tube 19 and A batteries 20.

It will be seen that if, through any faulty connection, the B battery should be connected to the filament 21 of the vacuum tube, that excessive damaging current cannot flow for the reason that the high resistance lamp 12 does not allow more than approximately one-eleventh (or less) of an ampere to flow. In addition to this, the lamp 12 will light and give a signal indicating a faulty connection.

Also, if the B battery should be short circuited in any other manner, the current will necessarily flow through the lamp 12 and light such lamp and protect the B battery.

It will be seen, therefore, that an extremely simple type of protecting and signalling device has been provided for the B batteries of wireless systems, and that the device will not only protect the filaments of the tubes and the batteries themselves, but

will also give a pronounced signal when any faulty connection is made.

It is to be noted further that the device is extremely simple and cheap and may be readily renewed or replaced when needed with a minimum of expense.

It is to be noted further that the device is carried directly by the B batteries, does not occupy much room, and may be readily installed with scarcely any alteration of the wireless system.

It is to be noted further that the minute current flowing in the plate circuit is not appreciably altered by the interposition of this protective device.

Although the invention has been described in considerable detail, it is to be understood that the invention may be variously embodied and is, therefore, to be limited only as claimed.

I claim:

1. A protective device for wireless systems comprising a socket, a band carried

thereby, a supporting bar rigidly clamped to said socket by means of said band, said supporting bar having a metallic connecting member electrically joined to one terminal of said socket, a second terminal carried by said socket and a relatively small wattage lamp removably carried within said socket.

2. A device adapted for attachment to the binding post of a wireless battery, said device comprising a supporting insulating bar having a metal contact adapted to receive said binding post, a lamp socket, a band surrounding said socket and clamped to said bar, a binding post carried by said band and electrically connected to the other terminal of said socket, and a high voltage high resistance lamp removably carried within said socket.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin.

PAUL O'SULLIVAN.