July 11, 1939. T. D. BROSS 2,165,693

RADIO CONTROL DEVICE

Filed Jan. 25, 1937

Fig. 1.

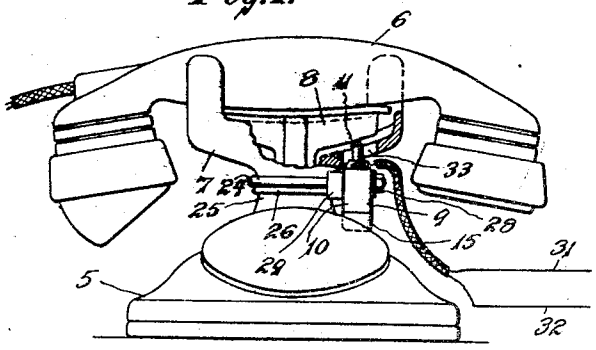


Fig. 2.

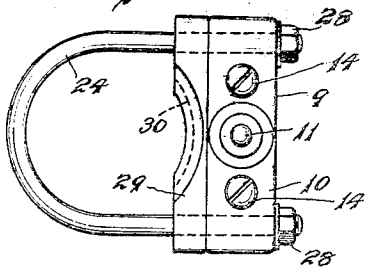


Fig. 3.

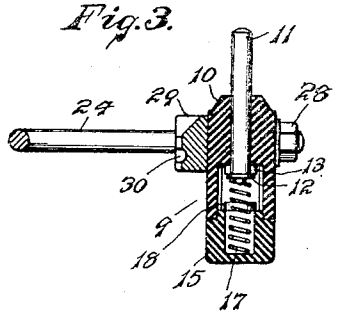
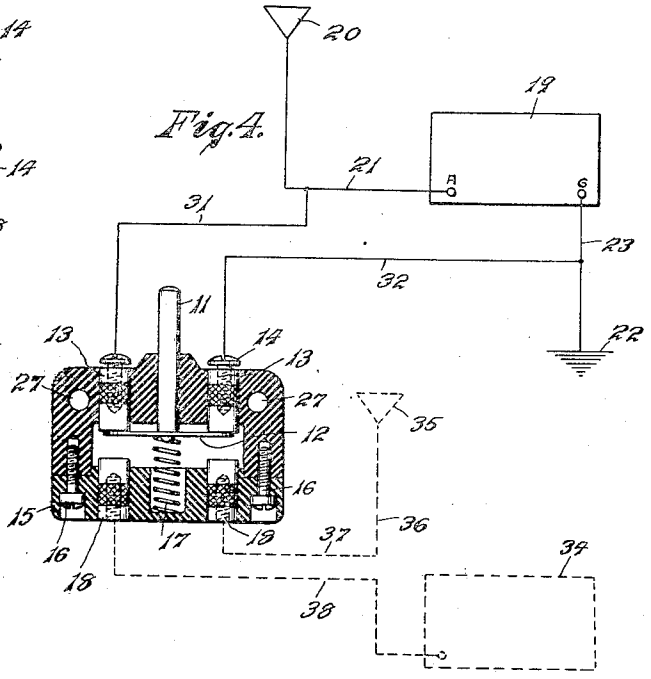


Fig. 4.



Inventor

THEODORE D. BROSS.

By Louis V. Lucia

Attorney

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RADIO CONTROL DEVICE

Theodore D. Bross, Hartford, Conn.

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6 Claims. (Cl. 179—2)

This invention relates to a radio control device which will operate as a remote control for a radio receiving set.

As it is very annoying to use a telephone in the vicinity of a radio during the reception of a program, its is desirable to provide means whereby the sound of a radio, or other similar devices such as electric phonographs, etc., may be lowered or entirely eliminated while the telephone is being used.

The object of my invention, therefore, is to provide a device which is operated upon the raising of the telephone receiver and whereby the volume of sound produced by the radio, or any similar device, may be automatically lowered or eliminated during the use of a telephone.

A further object of my invention is to provide a circuit controlling device which is adaptable to various systems of radio circuits and a still further object is to provide such a device which is especially adapted for use with a French type telephone instrument.

One embodiment of my invention is illustrated in the accompanying drawing in which:

Figure 1 is a front view, in elevation, of a French type telephone instrument with parts thereof broken away and showing my improved device attached thereto.

Figure 2 is a plan view, in elevation, of an improved switch embodying my invention.

Figure 3 is a side view thereof, in central vertical section.

Figure 4 is a front view, in central vertical section, showing the same as used in connection with two different systems of radio circuits.

As illustrated in the drawing, the numeral 5 denotes the base of a well known French type telephone instrument having the usual combination receiver and transmitter hand set 6 which is supported in a cradle 7 within which is mounted the vertically movable operating plunger 8 of the telephone. My invention provides an electric switch 9 comprising a shell 10 having a switch plunger 11 slidably mounted therein for operating a circuit closing bar 12. Contact members 13—13 are mounted in said shell and are provided with attaching means, such as screws 14—14, for attaching the wires of a circuit thereto.

A cover 15 is secured to the said shell by means of screws 16. The said cover is provided with a recess in which is mounted a coil spring 17 for moving the circuit closing bar 12 towards a circuit closing position wherein the said bar is in engagement with the contacts 13—13 and a set of contacts 18—18 is also provided in said cover.

As illustrated in Figure 4 of the drawing, the numeral 19 indicates a radio receiving set to which is connected an antenna 20, by means of a lead wire 21, and a ground 22, by means of a lead wire 23.

In the embodiment of my invention as illustrated, the switch 9 is attached to the telephone instrument by means of a clamp 24 which fits around the neck 25 of the telephone base and is positioned thereon by means of a bead 26 which is usually found on such sets. The said clamp extends through apertures 27 in the shell 10 of the switch, which is clamped to the said neck of the telephone base by means of nuts 28. A clamping bar 29 is provided between the said switch shell and neck; the said bar being provided with a notch 30 adapted to receive a portion of the bead 26 so as to position the clamping bar and switch securely in engagement with said neck.

When it is desired to control the operation of a radio receiving set as indicated at 19, a lead wire 31 is connected between the lead wire 21 of the antenna and one of the contacts 13 and another lead wire 32 is connected between the lead wire 23 of the ground and the other contact 13. It will be seen from the illustration in Figure 1, that when the said switch is mounted to the telephone instrument of the French type, as above described, the switch operating plunger 11 will extend upwardly through the opening 33, which is commonly provided in such telephone sets, and contact with the telephone operating plunger 8.

When the hand set 6 is lifted off the cradle 7 of the telephone instrument for the use of the telephone, the operating plunger 8 will move upwardly. This will permit the spring 17 of the switch to raise the switch operating plunger 11 and cause the circuit closing bar 12 to come into engagement with the contacts 13—13 and thereby shunting the circuit between the antenna 20 and the ground 22 through the lead wires 31 and 32. This will cause the sound of the radio receiving set to be reduced to a considerable extent while still permitting the radio set to produce audible sound; thus permitting the use of the telephone without interruption or annoyance from the radio set and at the same time allowing other persons near the radio to hear the said radio.

The improved switch of my invention is also adapted for use in connection with radio receiving sets such as small table models, which are

usually connected to only one of either the antenna or the ground.

As illustrated, the numeral 34 indicates such a radio receiving set which is connected to an antenna 35 by means of a lead wire 36. In such installations, my improved switch is connected in series with the antenna by means of lead wires 37 and 38, each of which are connected to one of the contact members 18—18 in the cover of the switch.

The circuit closing bar 12 will rest in engagement with the contacts 18—18 when the telephone instrument is not in use and the hand set 6 rests upon the operating plunger 8. This keeps the switch plunger 11 in a down position and the said circuit closing bar 12 in a circuit closing position upon the contacts 18—18. When the telephone is being used, the operating plunger 8, moving upwardly, will release the switch operating plunger 11 and, thereby cause the spring 17 to lift the circuit closing bar 12 out of engagement with the contacts 18—18 thus breaking the connection between the antenna and the radio receiving set 34. When the hand set 6 is again placed upon the member 8, the contact bar 12 will be moved downwardly; thus closing the connection between the contacts 18—18 and restoring the connection between the antenna 35 and the radio receiving set 34 whereupon the sound of the said radio set is returned to its normal degree.

From the illustration and the above description, it will be clearly understood that I have provided an improved switch which is particularly adaptable for use in connection with French type telephone instruments for controlling the reception of a radio set, and that I have further provided a switch which is adaptable to various types of radio receiving circuits by simply changing the connections from one side of said switch to the other, such as connecting the lead wires to the contacts 13—13, at the top of the switch, for controlling a radio set having both an antenna and a ground, or connecting the lead wires to the contacts 18—18, at the bottom of the switch, for controlling a radio having only an antenna or a ground.

While I have shown and described one form of a switch comprising an embodiment of my invention, it is to be understood that the same may be modified in construction to a greater or lesser extent without departing from the scope of my invention as set forth in the appended claims.

I claim:

1. A radio control device comprising a switch adapted to be secured to the neck of the base of a French type telephone instrument and connected to a radio receiving circuit, the said switch having an operating member extending therefrom through an opening in said instrument and in position to be operated by a movable member of said instrument, a circuit closing bar operable by said operating member, a pair of contacts engageable by said bar for shunting the said radio circuit during the use of said telephone instrument upon the release of an operating member thereof, and a separate set of contacts in said switch whereby a radio receiving circuit may be connected thereto for breaking the latter circuit during the said use of the telephone instrument.

2. In combination with a radio receiving set and a telephone instrument comprising a movable member; a controlling device for said radio comprising a switch adapted to be mounted on said telephone instrument, the said switch having a pair of contacts adapted to be connected to the said radio for shunting the antenna and ground thereof during the use of said telephone instrument and a separate pair of contacts adapted to be connected to an antenna of a radio receiving set for disconnecting the said receiving set from said antenna during the use of said telephone instrument, a circuit closing bar movable between said pairs of contacts and means adapted to be engaged with said movable member for operating said bar.

3. In combination with a radio receiving set and a telephone instrument comprising a receiver; a device for controlling the operation of said radio comprising a switch adapted to be mounted on said instrument, a circuit closing bar in said switch, a pair of contacts adapted to be engaged by said bar upon the lifting of said receiver from said telephone instrument and a separate pair of contacts in said switch adapted to be engaged by said operating bar when the said receiver is replaced upon the said instrument.

4. In combination with a French type telephone instrument, a radio circuit controlling switch comprising a casing, clamping means comprising a U-shaped member having its ends extending through said casing for clamping the same to the neck portion of said telephone instrument, and an operating member adapted to operate said switch upon the lifting of the receiver of said telephone instrument.

5. For a telephone instrument having a movable member and an opening adjacent thereto; a radio circuit controlling switch adapted to be mounted on said instrument and including means extending through said opening for operating said switch by movement of said movable member.

6. In combination with a radio receiving circuit and a telephone instrument having a movable member and an opening adjacent thereto; a controlling device for said radio comprising a switch adapted to be mounted on said telephone instrument, the said switch having a pair of contacts adapted to be connected to said circuit, a circuit closing bar in said switch and means extending from said switch through said opening for actuating said bar by movement of said movable member.

THEODORE D. BROSS.