

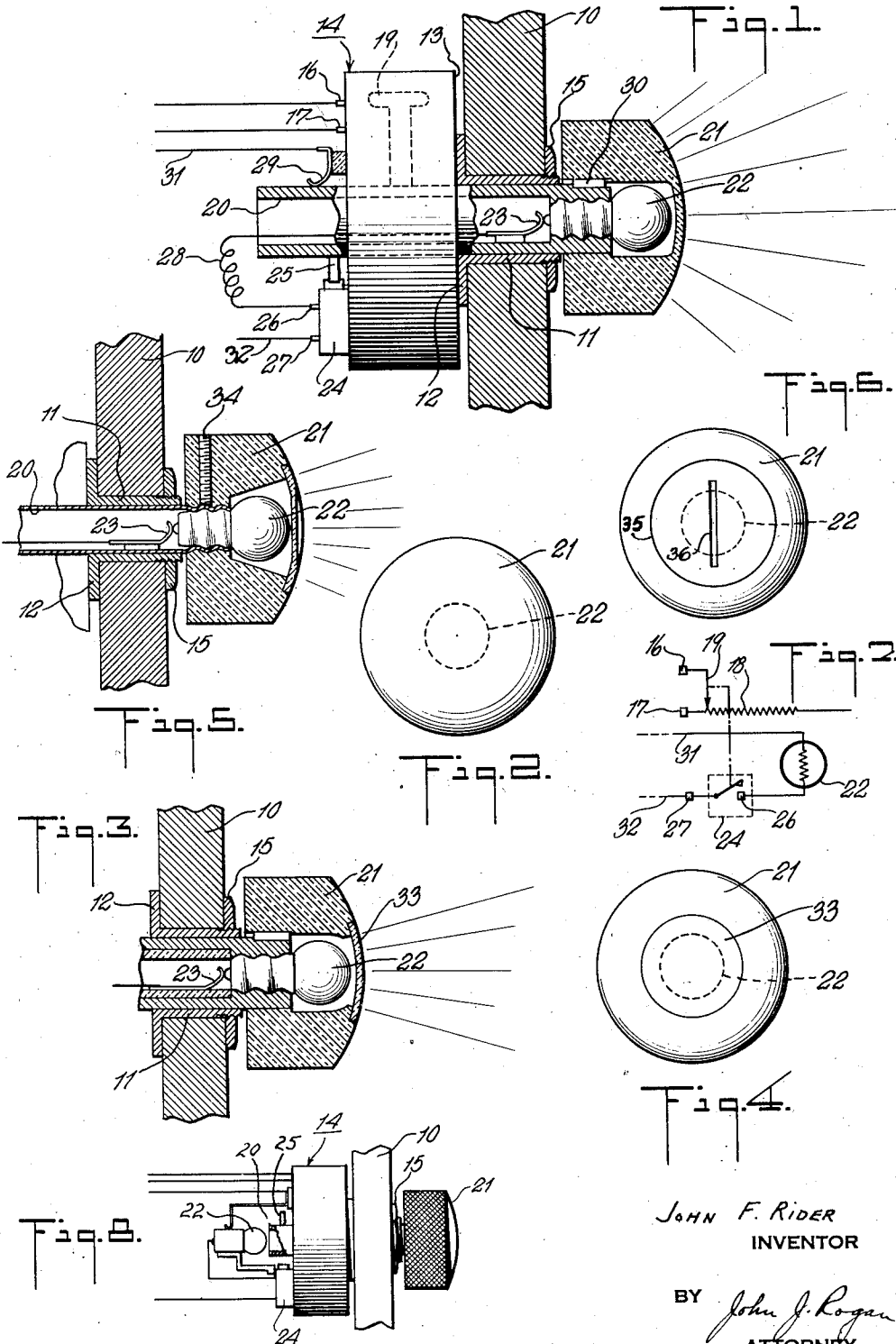
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UNITARY VOLUME CONTROL SWITCH AND DIALITE ASSEMBLY

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UNITARY VOLUME-CONTROL SWITCH AND
DIALITE ASSEMBLY

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2 Claims. (Cl. 201-56)

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This invention relates to circuit control and indicator units and more particularly to control and indicator devices for radio sets and the like.

A principal object of the invention relates to an improved volume control and pilot lamp unit for radio receivers, power amplifiers and the like.

A feature of the invention relates to a simplified construction for "on" and "off" switch of a radio set or the like in conjunction with a volume control unit.

Another feature relates to an improved power switch and volume control unit having a hollow control shaft which serves the double function of a mounting and adjustable shaft for the volume control unit proper, and as a receptacle for a pilot lamp to show when the radio set or the like is turned on.

A further feature relates to an improved volume control and pilot lamp construction which simplifies the assembly and wiring of radio receivers and the like.

A still further feature relates to a novel construction of control shaft and knob for volume controls and the like, wherein the knob also acts as a housing for a pilot lamp. As a result of this feature, the pilot lamp of the usual radio set can be incorporated directly in the adjusting knob or dial, thus simplifying the wiring and assembly cost of the set and effecting a saving in panel space. This feature is of particular importance in the newer portable and pocket size radio sets.

A still further feature relates to the novel organization, arrangement and relative location and interconnection of parts which cooperate to provide a simplified and improved volume control and pilot lamp assembly for radio sets and the like.

Other features and advantages not specifically enumerated will become apparent after a consideration of the following detailed descriptions and the appended claims.

In the drawing which shows certain preferred embodiments,

Fig. 1 is a view, partly sectional, of a unitary volume control, power switch and pilot lamp assembly according to the invention.

Fig. 2 is a front view of the adjusting knob of Fig. 1.

Fig. 3 is a modification of Fig. 1.

Fig. 4 is a front view of the knob of Fig. 3.

Fig. 5 is a further modification of Fig. 1.

Fig. 6 is a front view of the knob of Fig. 5.

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Fig. 7 is a schematic diagram of the electrical circuit controls of Figs. 1, 3 and 5.

Fig. 8 is a view of another modification.

Referring to Figs. 1 and 2, there is shown a portion of any suitable panel 10, such for example as the front panel of a radio receiver cabinet, and having a hole through which passes the metal sleeve 11, which is integrally united at 12 to the front wall 13 of any well-known type of volume control unit 14. Sleeve 11 is threaded on its forward end to receive a lock-nut 15 for rigidly fastening the volume control unit against panel 10. In accordance with standard practice, the volume control unit has a pair of electrical circuit terminals 16, 17, insulated from each other and connected respectively to one end of the volume control resistance 18 (Fig. 7), and to the slider arm or contact 19 which is arranged to vary the amount of resistance in the associated circuit. Likewise, in accordance with standard practice, the contact arm 19 is fastened to a rotatable shaft 20 which extends forwardly beyond the sleeve 11 and is adapted to receive the finger knob 21.

In accordance with the invention, the shaft 20 which carries the contact arm 19 or other similar resistance varying element of the volume control unit, is hollow and has its forwardly extending end internally threaded to receive the usual pilot lamp 22. Supported within the shaft 20 but electrically insulated therefrom in any suitable manner, is a contact spring 23, which is adapted to engage the usual button contact at the base of lamp 22. In accordance with standard practice, a toggle or snap switch 24 is carried by unit 14 and has an operating arm (not shown) which is adapted to be engaged by the switch operating lug 25 carried by shaft 20, so that initial turning of said shaft in the "on" direction closes a circuit between lugs 26 and 27. Lug 26 is connected by a short flexible insulated wire 28 to the contact spring 23. Also insulatingly mounted on unit 14 is a contact spring 29 which is adapted to make rubbing contact with shaft 20.

Positioned over the forwardly extending end of shaft 20 is the finger knob 21 which has its central portion in the form of a cavity to house the lamp 22. Knob 21, is, in accordance with one phase of the invention, of a transparent material such as the plastic "Lucite" or other similar material. The knob 21 can be removably attached to the shaft 20 by a suitable friction spring 30 which is located between a flat on the extreme end of shaft 20 and a corresponding flat

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on the internal surface of knob 21. From the foregoing description, it will be seen that the entire volume control unit, power switch unit and pilot lamp are located at the same portion of the panel and the same shaft which operates the volume control arm also serves as the receptacle for the pilot lamp 22. Furthermore, the knob 21 being of transparent plastic, protects the pilot lamp and also provides a wide range illumination when the shaft 20 is turned so as to close the circuit of the pilot lamp. It will be understood that the wires 31 and 32 are connected to a suitable source of voltage for lighting the lamp 22 when the switch 24 is operated by initial turning of the shaft 20.

The construction shown in Fig. 3 is similar to that of Fig. 1, with the exception that the finger knob 21 is of opaque material such as Bakelite or the like but has a transparent and removable insert 33 to facilitate insertion and removal of the pilot lamp 22 while confining the illumination of a relatively restricted angle.

In the embodiment of Fig. 5, the shaft 20 is of relatively thin metal stock and has its forward end threaded so as to provide an internal thread to receive the pilot lamp 22 and an external thread to receive the finger knob 21 which has a corresponding threaded bore. The knob 21 can be fastened to the shaft 20 by a suitable set screw 34. In this embodiment, the knob is provided with a removable transparent window 35 having a slit 36 to facilitate its removal, so that access can be had to the pilot lamp.

While certain specific embodiments have been described, it will be understood that various changes and modifications may be made therein

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without departing from the spirit and scope of the invention. For example, the lamp 22, instead of being mounted at the forward end of shaft 20, can be suitably mounted at the rear end thereof as shown in Fig. 8.

What is claimed is:

1. In combination, a volume control resistor having a movable contact member and having a central rotatable hollow shaft to which said contact member is attached, a pilot lamp stationarily mounted in registry with the open rear end of said shaft, and a knob attached to the forward end of said shaft said knob having at least a light transmitting central region arranged for illumination by the passage of light from said lamp through said hollow shaft.

2. The combination according to claim 1 in which said resistor has a stationarily mounted housing from which said pilot lamp unit is supported.

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