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TADASHI IGARASHI
PORTABLE ELECTRICAL APPARATUS

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Fig. 2

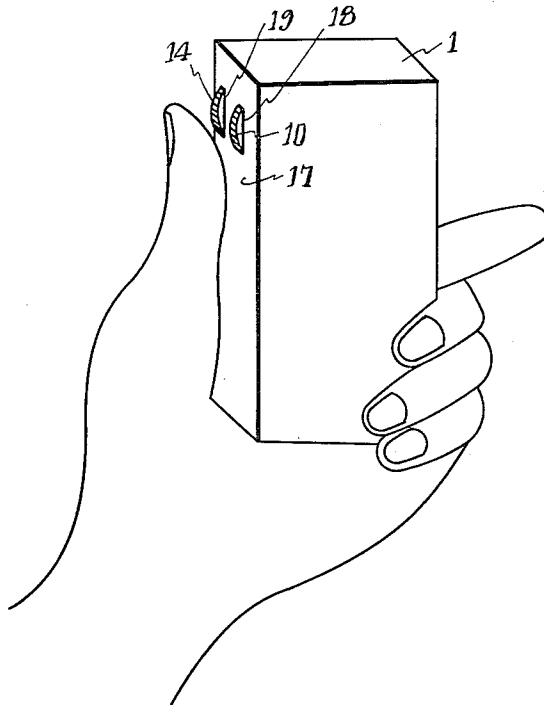
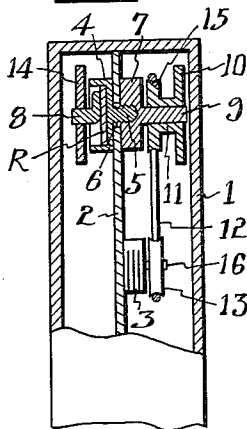


Fig. 1



Inventor
Tadashi Igarashi
Hill, Sherman, Merri, Cross & Simpson
Attys

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PORTABLE ELECTRICAL APPARATUS

Tadashi Igarashi, Tokyo, Japan, assignor to Sony Kabushikikaisha (Sony Corporation), Tokyo, Japan, a corporation of Japan

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3 Claims. (Cl. 74-10)

This invention relates to a portable electrical apparatus, and more particularly to a transistor radio receiving set which is readily operated by one hand.

An object of this invention is to provide a small and compact portable radio receiving apparatus using transistors, which is easily and simply assembled.

Another object of this invention is to provide a portable transistor radio receiving set in which tuning for the receiving frequency and the volume control for the output can be easily and simply selectively adjusted by the one hand grasping the set.

Other objects, features and advantages of this invention will be more apparent from the following detailed description taken in connection with the accompanying drawing in which:

FIG. 1 illustrates a fragmental sectional side view of the main part of a radio receiving apparatus according to this invention, one part of a case being removed, and

FIG. 2 shows a perspective view of a portable radio receiving apparatus according to this invention held in the left hand.

Referring to the drawing, 1 is a case of a small radio receiving set and 2 a base or partition plate located in the case 1. On the opposite sides of the base plate 2 are respectively mounted a variable capacitor 3 and a variable resistor R.

In accordance with this invention a threaded shaft 5 is formed on one side of a flange member 4 which supplies a casing in which an adjustable element, such as the variable resistor R, is enclosed. This shaft 5 is inserted into a hole 6 through the base plate 2. To the extended end of the threaded shaft 5 is screwed a block member or nut 7 which abuts against the opposite face of the base plate 2. The flange member 4 is clamped on the other side face of the base plate 2.

The variable resistor R has an adjusting shaft 8 for controlling its resistance and the nut 7 has an extended shaft 9 which is aligned with the shaft 8.

In order to apply the above arrangement to a portable radio receiving set, a sleeve 11, which is preferably formed integrally with a pulley 15 and a knob 10 is rotatably mounted on the shaft 9. This shaft which is connected to the shaft 16 of another adjustable element, such as the variable capacitor 3, by a belt which is put around the pulley 15 and the pulley 13 which is mounted on the shaft 16. On the shaft 8 is attached another knob 14, which serves to adjust the variable resistor R.

The knobs 10 and 14 are disposed substantially side by side in such a manner that fragmental parts of the rims of the knobs 10 and 14 project through to the outside of one face 17 of the case 1 through recesses 18 and 19 respectively and so that the thumb of the grasping hand can selectively change the projected parts of the rims of one of the knobs. This permits rotation and a selective engagement of both the variable capacitor 3 and the variable resistor R by the thumb of the grasping hand, as shown in FIG. 2.

Thus, according to this invention, the adjusting shafts 8 and 9, which are aligned with each other, are easily and simply mounted on the base plate 2 by the flange member 4 and the nut 7 which are disposed on the opposite faces of the base plate 2. Accordingly, other com-

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plicated arrangements can be dispensed with in the mounting of the shafts 8 and 9 on the base plate 2.

The total length of the aligned shafts 8 and 9 is appreciably shortened so that the width of a case of such a radio receiving set can be reduced. Also the assembly arrangement can be simplified.

It will be appreciated that this invention can be applied to various types of portable and small, hand held electrical apparatus, such as a wireless microphone or a hearing aid having adjustable means to be manually adjusted instead of the variable capacitor 3 and variable resistor R as described hereinbefore.

This invention has an additional advantage in that the thumb of the hand which grasps the case can selectively engage and actuate the rim of the left knob 10 or the rim of the right knob 14, thereby enabling both tuning and volume control of the portable radio set easily while the set is grasped in one hand.

While I have explained a particular embodiment of my invention, it will be understood, of course, that I do not wish to be limited thereto since many modifications may be made and I, therefore, contemplate by the appended claims to cover any such modifications as fall within the spirit and scope of my invention.

What I claim is:

1. A small electrical appliance having a generally rectangular and flat casing of a thin, pocket fitting thickness to be held in one hand and having two adjacent, independently manually operable controls, said casing having its internal thickness substantially equally divided by an internal partitioning base plate secured to at least one end of said casing, a hole through said base plate adjacent one end of said casing, nut and bolt-like means through said hole clamping said base plate therebetween and forming the sole mounting and rotary bearings for two coaxial and axially spaced apart control discs positioned one on each side of, and substantially parallel to, said partition plate, said casing having two spaced apart openings through its thin side adjacent said end and said control discs having only small portions of their peripheries extending therethrough to be selectively thumb actuated.

2. A pocket portable electrical device comprising a flat, hand held case of a thin thickness, an internal thickness partitioning base plate secured in said case and having a hole therethrough adjacent one end of said case, a member having a male portion extending through said hole and an enlarged base plate engaging portion with an axially open cylindrical recess therein, a first adjustable control rotatively secured in said recess and having a thumb actuated, control disc coaxially and directly connected thereto, a female member engaging said male portion, clamping the other face of said base plate, and having an outwardly extending shaft means, a second thumb actuated, control disc rotatably mounted on said shaft means and having means operatively connecting it to a second control, spaced holes through said casing, and only small portions of the peripheries of said control discs projecting therethrough in side by side but axially spaced relation to be selectively engaged by the thumb of the hand holding the said device.

3. A pocket portable receiving radio comprising a flat, generally rectangular, and hand held case of a small and pocket fitting thickness having an internal, thickness dividing, partition plate secured therein and having a hole therethrough adjacent one end of said case, a bolt-like member having an enlarged flange clampingly engaging said plate and axially open to provide a cylindrical recess, a first rotatively adjustable control in said recess, a thumb actuated disk connected thereto, a threaded shaft extension of said bolt-like member extending through said hole, a nut-like member screwed thereon, clampingly en-

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gaging said plate, and having an axial shaft extension co-axial with said cylindrical recess, a combined thumb actuated disc and second control actuating member rotatable on said shaft, a second control member operatively connected thereto, openings in said casing adjacent one end thereof, and said thumb actuated discs extending only partially through said openings.

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