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PORTABLE RADIO RECEIVER

Filed Feb. 7, 1945

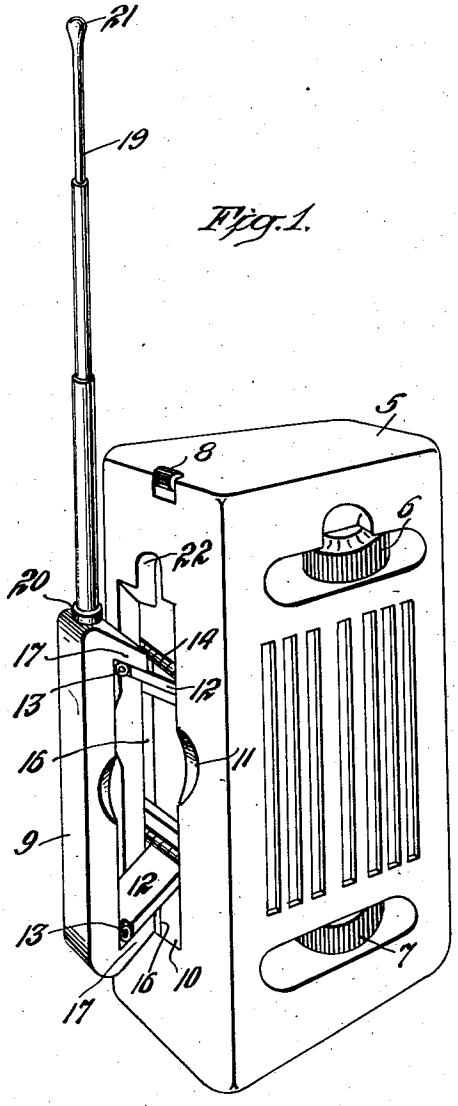


Fig. 1.

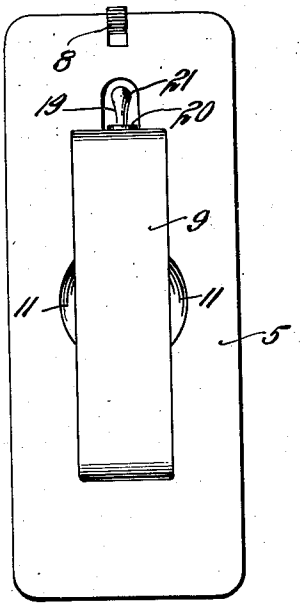


Fig. 2.

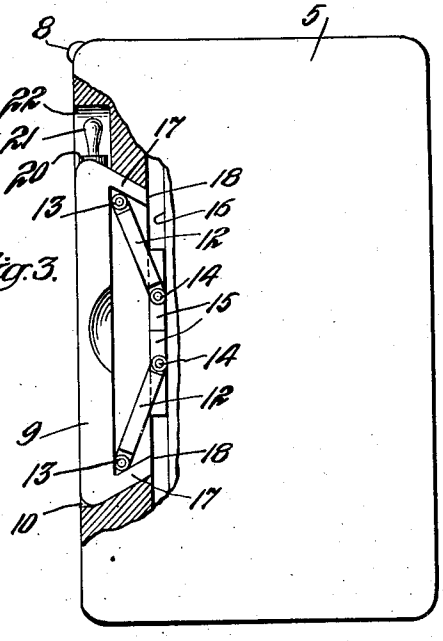


Fig. 3.

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PORTABLE RADIO RECEIVER

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8 Claims. (Cl. 250—14)

The invention herein disclosed relates to antennas and particularly for the small, hand-carried portable receiving sets.

Special objects of the invention are to provide an efficient form of aerial which when not in use may be collapsed or folded completely into the case of the receiver and which, when desired for service, can be instantly withdrawn from the case and extended for radio reception.

Other objects of the invention are to provide a practical and desirable form of disappearing handle and to utilize the disappearing handle structure as a mounting and carrier for the antenna.

Other objects and the novel features by which the purposes of the invention are attained are set forth or will appear in the course of the following specification.

The drawing accompanying and forming part of the specification illustrates a present practical embodiment of the invention. Structure, however, may be modified and changed as regards this illustration, all within the true spirit and broad scope of the invention as hereinafter defined and claimed.

Fig. 1 in the drawing is a perspective view of one of the small "personal" radio sets, showing the handle withdrawn from the case and the telescopic antenna extended for use;

Fig. 2 is a face view showing the antenna collapsed and the supporting handle folded back into the case;

Fig. 3 is a broken, part sectional view illustrating the parts in the collapsed, folded condition shown in Fig. 2.

In these several views there is shown a small size receiver in which the parts are compactly contained within a case 5, with the necessary controls such as the tuning knob 6, volume control 7 and "on" and "off" switch 8 arranged in substantially flush relation.

This same substantially flush relationship is carried out further with the handle provided for carrying the case and which is shown as a substantially flat, straight, upright bar or plate 9 adapted to sink into a correspondingly shaped opening or seat 10 in the side of the case. In such position the handle forms a closure to this seat or opening, substantially as indicated in Figs. 2 and 3, but is made accessible for quick withdrawal through finger notches 11 at the opposite edges of the opening.

To maintain substantially parallel relationship and provide a firm, foldable connection between the handle and case, flat links 12 of substantially the full width of the handle are shown hingedly connected at 13 with the back of the handle, near opposite ends, and hingedly connected at 14 at their inner ends with blocks 15 oppositely sliding in the guide grooves 16 in the case.

In the closed position of the handle the links 12 stand in a somewhat inwardly inclined relation, as indicated in Fig. 3, so that outward pull on the handle will have the effect of pulling the slides 15 longitudinally apart to the relation shown in Fig. 1. In the latter position the links 12, more abruptly inclined, may come to a stop against the inside faces of the rearwardly extended inclined shoulders 17 on the back of the handle near the upper and lower ends of the same. The inner ends of these convergently inclined extensions may abut the shoulders 18 in the case to position the handle in its flush relation with the side of the case, Fig. 3.

The antenna is shown made up of telescopic, collapsible, tubular sections 19, with the larger or base section slidable into a tubular well or socket 20 in the flat, straight portion of the handle. The base section or the socket in which this section slides is suitably connected with the radio, as by a flexible lead or the like which will not interfere with the folding movements of the handle or with the collapsing and extending movements of the antenna.

To enable quick manipulation, the upper antenna section is shown as having a small knob or handle portion 21 by which the sections can be telescopically shifted one way or the other. This handle portion is shown as left in a slightly projecting, exposed position with the parts in collapsed relation and the case is shown as having a notch 22 at the upper end of the handle opening to form a pocket for receiving such projecting portion, Figs. 2 and 3.

In the folded condition the parts are substantially housed and contained within the case, with the antenna protected from mechanical injury by its collapsed seating in the body of the handle. To use the set, the handle is withdrawn to bring the antenna out into the clear and then the antenna can be extended by pulling out the telescopic sections to any desired extent. The handle then serves both as a means for carrying the case and for pointing the aerial in different directions. In such extended relation the antenna prevents accidental closing of the handle, but when it is again desired to close the case this can be accomplished by simply telescoping the antenna sections and thrusting the handle back into its pocket.

The slide blocks 15 and the short wide links pivotally connected between said blocks and the back of the handle with hinges the full width of the links, provide a smooth acting, firm, substantial collapsible connection between the handle and case and which will act to restrain or hold the handle in either the folded or the extended relation. The length of the antenna is not restricted by either the size of the case or the length of the handle, since as many sections as prove most effective can be used in this telescopically collapsible form of antenna. In the closed position there are no projecting parts and the case, therefore, may be smooth and flush on all sides, adapted to be readily slipped into or out of a carrying pocket, support or holder.

What is claimed is:

1. A hand-carried portable radio comprising a case having an extensible carrying handle foldably connected therewith and a collapsible antenna seated in and carried by said handle.

2. A portable radio comprising a case having an opening in one side, a handle for carrying said case adapted to seat in and close said opening, connections between said handle and case enabling said handle to be seated in the case or to be withdrawn therefrom, and an extensible antenna collapsibly seated in said handle and positioned by the withdrawing of the handle out to one side of the case.

3. A portable radio having an opening in one side and a carrying handle adapted to seat in and form a closure for said opening, pivoted links connected with said handle for retaining the handle in seated relation and for supporting the handle extended outside the case, and an extensible antenna collapsibly mounted on said handle.

4. A portable radio having an opening in one side and a carrying handle adapted to seat in and form a closure for said opening, pivoted links connected with said handle for retaining the handle in seated relation and for supporting the handle extended outside the case, an extensible antenna collapsibly mounted on said handle, and blocks slidably mounted in the case and providing movable anchorages for the inner ends of said pivoted links.

5. A radio having a longitudinal guideway therein, blocks slidably mounted in said guideway, links having their inner ends pivotally connected with said slide blocks, a carrying handle pivotally connected with the outer ends of said links and an extensible antenna collapsibly mounted on said handle.

6. A radio having a longitudinal guideway therein, blocks slidably mounted in said guideway, links having their inner ends pivotally connected with said slide blocks, a carrying handle pivotally connected with the outer ends of said links and an extensible antenna collapsibly mounted on said handle, said case having an opening externally of said guideway and said handle seating in and forming a closure to said opening.

7. A radio having a longitudinal guideway therein, blocks slidably mounted in said guideway, links having their inner ends pivotally connected with said slide blocks, a carrying handle pivotally connected with the outer ends of said links and an extensible antenna collapsibly mounted on said handle, said case having an opening externally of said guideway and said handle seating in and forming a closure to said opening, the collapsible antenna having a finger grip end portion exposed at one end of the handle and the case having a notch at the corresponding end of the opening therein to receive said exposed handle portion of the antenna.

8. A portable radio case having a carrying handle foldable substantially flush therein and an antenna collapsible into said handle and foldable with said handle into substantially concealed relation in the case, the end of said antenna being protected within the case in the folded position of the handle but exposed when the handle is withdrawn for enabling extension of the antenna from the collapsed condition.

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