R. H. MANSON.

PORTABLE TELEPHONE SET.

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1,086,832.

Patented Feb. 10, 1914.

Fig. 1

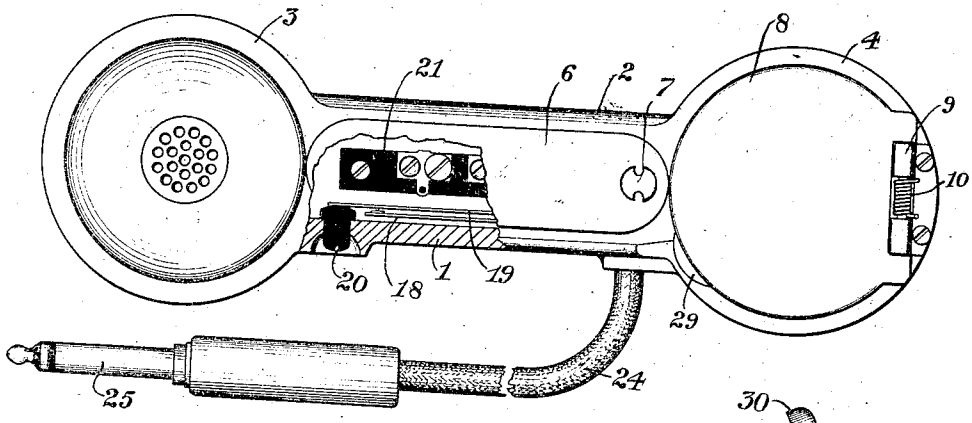


Fig. 2

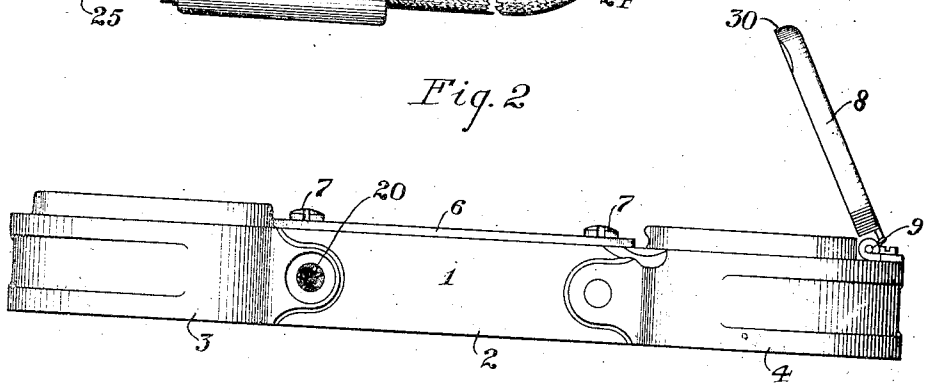
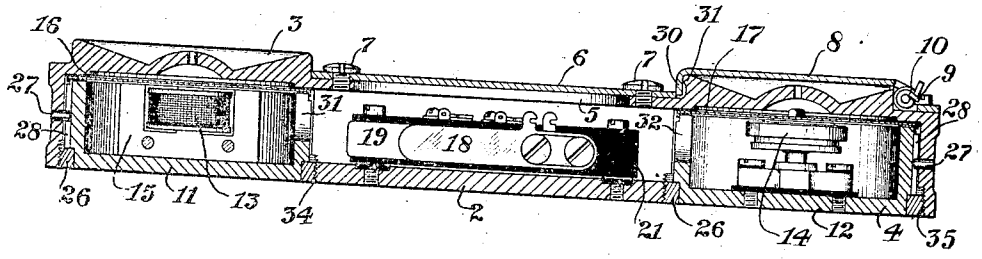


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

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PORTABLE TELEPHONE SET.

1,086,832. Specification of Letters Patent. Patented Feb. 10, 1914.

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To all whom it may concern:

Be it known that I, RAY H. MANSON, a citizen of the United States, residing at Elyria, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Portable Telephone Sets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to telephone sets, and more particularly to portable telephone sets. Although I do not wish to limit my set to such a use, I have designed it with the object of condensing the set to occupy as small a space as possible so that it may be carried in the pocket of the clothes or of an automobile chest or other similar place. For example, this telephone, when provided with a plug and cord, may be carried by autoist, delivery men, policemen, etc., and plugged into one of a number of jacks provided for that purpose and installed at various places about a district. In order to fit a telephone set for this and the other purposes for which it may be used, it is necessary to provide a simple, compact, and convenient set which is light, durable, and adapted to be carried in the pocket, tool chest or other similar receptacle.

I construct a frame work of aluminum or other material which combines lightness, hardness and durability. This frame contains a transmitter and a receiver. When the receiver is held to the ear of the user, the transmitter is not directly in front of the mouth. I use a reflector to deflect the sound waves to the transmitter which preferably may be folded close into the frame for the sake of convenience.

The invention itself will be best understood by reference to the following description when taken in connection with the accompanying illustration showing one specific embodiment thereof, while its scope will be more particularly pointed out in the appended claims.

Figure 1 is a front elevation, cut away in part and showing the plug and cord. Fig. 2 is a side elevation. Fig. 3 is a vertical section taken along the long axis.

Referring to these figures, where the same numerals have been used on the same parts throughout, 1 represents the frame which may be of any suitable material but which preferably is composed of aluminum. The frame consists of a hollow handle portion 2 which is expanded at one end into a receiver chamber 3 and at the other into a transmitter chamber 4. These chambers are of substantially the same depth as the handle, and are cut away in the back as shown at 34 and 35. The front of the handle is cut away at 5. A cover 6 fastened on the frame by screws 7, covers this opening. Upon the front of the transmitter chamber I hinge at 9 a reflector 8 which is spring pressed to open position by a spring 10. This member is bent over to form a flange 30 along its edges. When open it serves to deflect the voice to the transmitter, and when closed the edge of the flange 30 snaps under the end of the cover plate 6 holding the reflector down where it covers the front of the transmitter casing, protecting the same. A cup 11 having a receiver coil 13 and flux conductor 15 mounted therein, is inserted through the opening 34 into the chamber 3. One side of the cup is cut away at 31 for the passage of electrical conductors. A vertical slot 28 is cut in the wall. This registers with the pin 27 set in the chamber wall, and when engaging the same, prevents rotation of the chambers. A threaded annular member 26 fitting between the cup and inner chamber wall serves to retain the receiver cup in place. A second cup containing the transmitter 14 is likewise inserted and by similar means retained in the second chamber. The receiver diaphragm 16 and the transmitter diaphragm 17 are clamped between the respective cups and the top walls of the chamber. Within the hollow handle I mount a block of insulation 21 and upon this two contact springs 18 and 19 which are normally in engagement closing the circuit through the telephone. In the side wall of the handle a push button 20 is mounted. This is spring pressed to its outward position by the long spring 19. A cord 24 leads from the set to a plug 25.

I provide a plurality of spring jacks distributed about a district and connected to a telephone exchange. The telephone may be connected in by inserting the plug into one of these jacks. This will of course operate the line signal. To further attract the

operator's attention, the button 20 may be operated to repeat the operation of the signal. This corresponds to the result caused by the operation of the switch hook in a wall or desk set. After connection is made, the receiver is placed to the ear and the instrument held so that the transmitter is as near the mouth as possible. This places the transmitter to one side of the mouth and the reflector directly in front thereof. When the user is speaking, some of the sound waves impinge against the reflector and are deflected to the transmitter.

The frame thus made of a single piece is rendered more stanch. The apparatus inclosed within the parts is accessible, since the rings 26 may be removed by a spanner and the cups taken out. The chamber being of about the same depth as the handle bar and the parts being arranged on a straight line; that is, the fronts of each being substantially parallel with the other and with the long axes of the handle bar, my set is rendered very compact and free from projecting parts which might catch in the clothes; so that it may easily be carried about in the pocket.

While I have shown my invention in this particular form, it will be obvious to those skilled in the art that numerous and extensive departures from the form and details of the apparatus here shown may be made without departing from the spirit of this invention, the same being herein shown solely for the purpose of clearly illustrating one specific embodiment thereof.

I claim:

1. In a portable telephone set, the combination of a hollow handle bar having an opening in the front, a telephone casing formed upon each end of the handle bar integral therewith and open in the rear, a switch mounted in the handle bar adjacent to said opening, a cover for said opening, and a cup fitted inside of each casing closing the opening therein.

2. In a portable telephone set, the combination of a hollow handle bar having an opening in the front, a hollow casing integral with said handle bar mounted at the end thereof, said casing having an opening in the rear, and a cup containing telephone apparatus fitted within said casing, the bottom of the cup serving to close the opening in the casing.

3. In a portable telephone set, the combination of a hollow handle having a substantially cylindrical shaped chamber formed on each end, the rear of each casing being cut away, a cup containing a transmitter inserted into one chamber and closing the opening, and a cup containing a receiver inserted into the other chamber.

4. In a portable telephone set, the combination of a hollow handle bar, a hollow chamber at one end thereof, said chamber having an opening in the bottom, a cup adapted to be inserted into said chamber and having an opening and a vertical slot in its walls, a pin mounted in said chamber to cooperate with the slot to prevent rotation of said cup, and means to retain said cup in said chamber.

5. In a portable telephone set, the combination of a receiver casing of watch case form, a transmitter casing of substantially the same size and shape, and a hollow handle bar of substantially the same depth as the casing, but having less width connecting the casings and all being in the same straight line, the sides of the transmitter and receiver casings being rounded.

In testimony whereof I affix my signature in presence of two witnesses.

RAY H. MANSON.

Witnesses:
A. B. Smith,
W. J. St. Ouge.