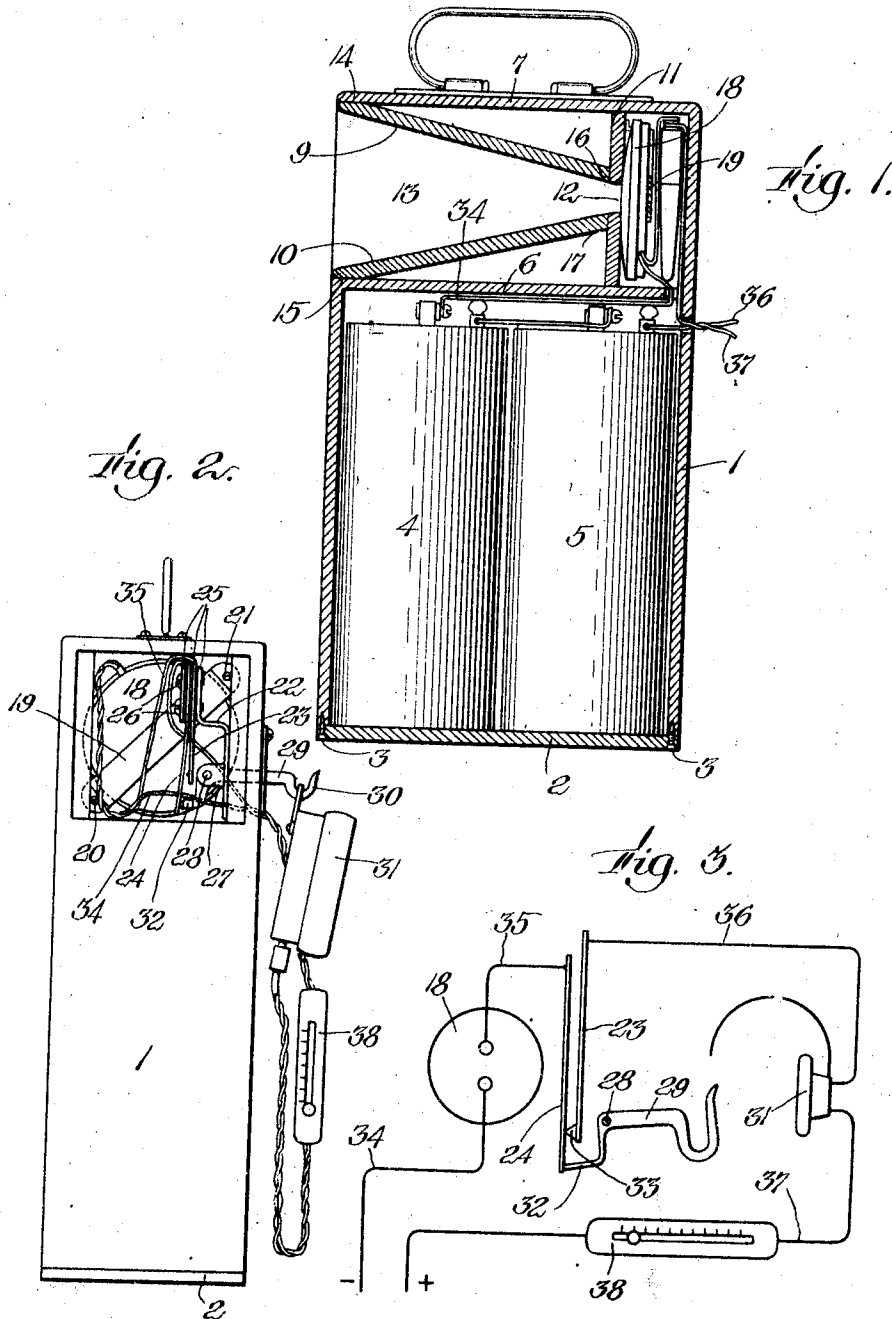


K. B. HASTINGS.
TELEPHONE APPARATUS.
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1,209,291.

Patented Dec. 19, 1916.



Witnesses:

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UNITED STATES PATENT OFFICE.

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TELEPHONE APPARATUS.

1,209,291.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, KENNETH B. HASTINGS, a citizen of the United States, and resident of Boston, in the county of Suffolk and State of Massachusetts, have invented an improvement in Telephone Apparatus, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My present invention is a telephone device which is intended primarily for use in aiding the hearing of deaf or slightly deaf persons in public places, such as banks, stores, hotel offices, information desks, and the like. There is a great demand for instruments to aid hearing, suitable for use in these places.

My present invention has for its object, to provide an apparatus of this kind which, although portable, is adapted for long use, *i. e.*, for several months or a year, being capable of holding electric batteries to energize the instrument for such a period.

It is also an object of the invention to provide an apparatus which will be attractive in appearance, of compact and unobtrusive form, and yet which will be readily recognized as a means to aid hearing of deaf persons and the public generally. It will be appreciated that customers for such apparatus will likely be diffident about using such an apparatus if too prominent or obtrusive in appearance, and, therefore, it is an important feature in this type of instrument to conceal, largely, the device and mechanism while still having the same disclose its purpose and utility.

I accomplish the foregoing objects by providing an attractive casing which is large enough to receive a pair of electric batteries to supply the receiver and transmitter of the device for a long period, preferably a year, and also to conceal in such casing the transmitting telephone instrument, and preferably a funnel or horn-like opening thereto, while providing the entire device so that it may be moved by hand upon a desk or table for use, and removed by hand therefrom, if desired, or be left in position as an unobtrusive and attractive article. I also prefer to provide an automatic shutoff and hook for the transmitter, together with a regulator or rheostat to adjust properly the tone for each person. The difficulty of providing such a telephone, capable of use for different per-

sons, each having different degrees of deafness, presents a considerable problem in apparatus of this type, as it is customary, and also necessary, for persons troubled with deafness to have separate and special transmitting and receiving instruments adjusted for each particular case, whereas in the present type of apparatus which is similar to a public telephone in its uses, the tone regulator and the general construction of the apparatus is important. For this purpose I prefer to make the inclosing case, box and horn, and all possible parts of the apparatus of wood, although it will be understood that such casing may be of metal with proper insulation. As herein illustrated, I use a wooden receptacle to receive the battery, concealed wooden horn and transmitter, together with an automatic switch on which the receiver and regulator are hung when not in use, removal of the receiver by the user throws on the current and the device is ready for use.

Referring to the drawings illustrating a preferred embodiment of my invention, Figure 1 is a view of the apparatus partly in cross section; Fig. 2 is a rear view of the device with a portion of the back casing removed; and Fig. 3 illustrates the wiring in diagrammatic form.

The box or casing 1 is preferably rectangular in shape, with a removable bottom portion 2 held to the sides with screws 3 and adapted to contain a pair of batteries 4 and 5. The upper part of the casing 1 is divided by the partition 6, into a sound receiving chamber between the partition 6 and the inclosing top 7. I prefer to affix within this upper chamber funnel or horn-shaped leaves 9 and 10, preferably of wood, extending from an opening left in the end or front of the upper receptacle backwardly to a partition 11 having a horizontal slot 12 therethrough, to which slot the leaves 9 and 10 converge, leaving the opening 13 as a flaring or funnel shaped entrance. The leaves 9 and 10 may be glued at 14 and 15 respectively to the top 7 and partition 6 and also to the partition 11 at 16 and 17, as clearly shown in Fig. 1. In addition to these fastenings, it may be desirable to fit in a few pins and screws along the sides or casing, where these leaves contact therewith, or they may be secured in any other suitable manner. The partition 11 divides the upper

part of the casing into two compartments, one section for the horn, and the other for the transmitter and switch. This transmitter 18 is of any ordinary type, being held in position against the partition 11 and adjacent the slot 12 by a bracket 19, which bracket is secured to the partition 11 by screws 20 and 21. Adjacent the transmitter is a switch which may be of any well-known type, and which is adapted to be operated by a hook lever on which the receiver is hung when the instrument is not in use, the weight of the receiver disconnecting the circuit and removal of the receiver connecting the circuit and energizing both the transmitter and the receiver. As herein illustrated, the switch is carried by a short metal bracket 22, and comprises the metal or conducting arms 23 and 24, separated from each other and the bracket by insulating material 25, all being secured by suitable screws 26 (see Fig. 2). The bracket 22 also carries a lug 27, to which is pivotally secured at 28 the hook arm 29, said arm having one end extending outside the casing and terminating in a hook 30 to receive the receiver 31. The other end 32 of the arm 29 extends beyond the pivot 28 and is arranged to press against the member 24 of the switch. When the receiver 31 is hung upon the hook 30, its weight is sufficient to oscillate the arm 29 and move the switch member 24 out of contact with the portion 33 of the switch member 23. Preferably, the member 24 is of sufficient spring power so that as the receiver 31 is removed from the hook 30 the normal resiliency of the member 24 will act to rock the unweighted hook lever 29 on its pivot and the switch member assume its normal position in contact with the part 33 of the member 23. This is a well-known type of automatic circuit breaking and controlling device, and is further illustrated in

Fig. 3, wherein one wire 34 from the battery 4 is connected to the transmitter 18, and the wire 35 from said transmitter to the switch member 24 is put into or out of circuit with the other wire 36 in electrical connection with the other switch member 23, receiver 31, wire 37, and battery 5. I also prefer to attach a regulator or rheostat 38 in the circuit to more readily control the toning of the instrument.

It will be readily appreciated that I have provided a convenient and serviceable telephone apparatus to aid persons with defective hearing, which apparatus is available in much the same manner as a public telephone, *i. e.*, at public places, information bureaus, etc., as already mentioned.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

An apparatus of the kind described to aid defective hearing, adapted for use by the public, comprising a receptacle inclosing and containing a telephone transmitter, sound concentrating means held and concealed in said casing in position for instant use and leading to the transmitter, a source of electrical energy within said receptacle and connected to the transmitter, and adapted to be thrown into and out of circuit by an external switch, a telephone receiver adapted for use at a distance from the receptacle and to control the switch, in combination with a rheostat adjacent the receiver to regulate the current supply to said instrument and thereby adjust the tone to the hearing of said user.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

KENNETH B. HASTINGS.

Witnesses:

JAMES R. HODDER,
SEBASTIAN VAUGHAN.