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W. G. TURNBULL, JR

2,530,556

SUPPORT AND CORD ASSEMBLY FOR HAND TELEPHONES

Filed April 26, 1947

FIG. 1

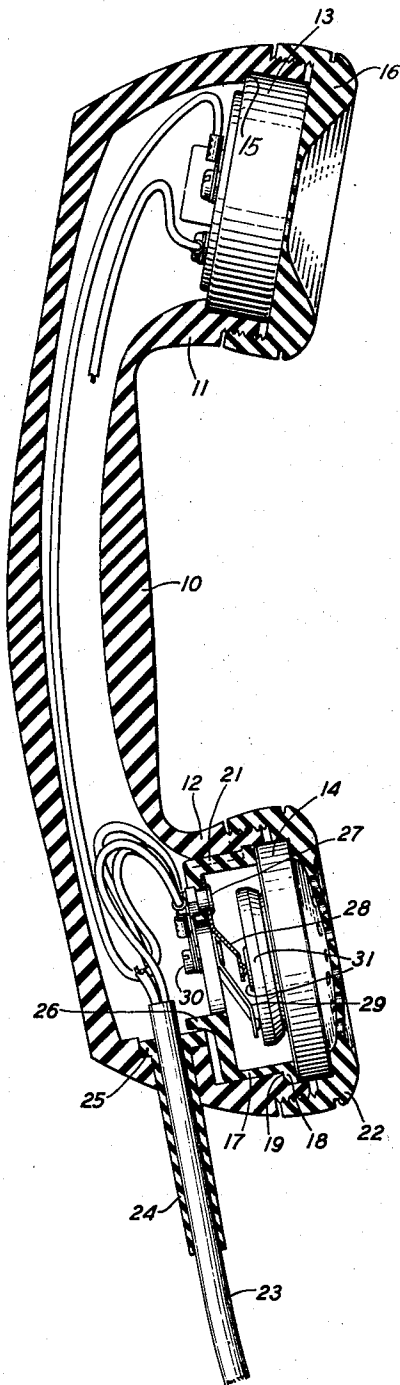


FIG. 2

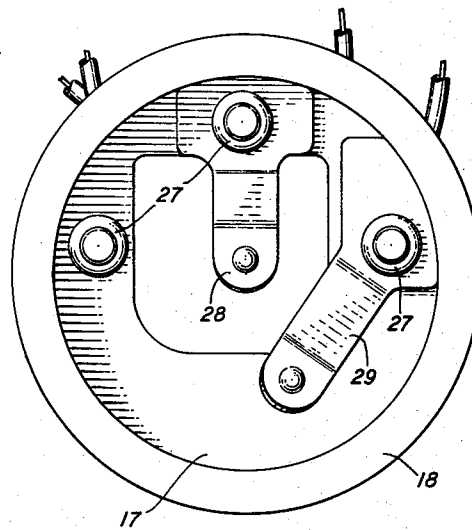
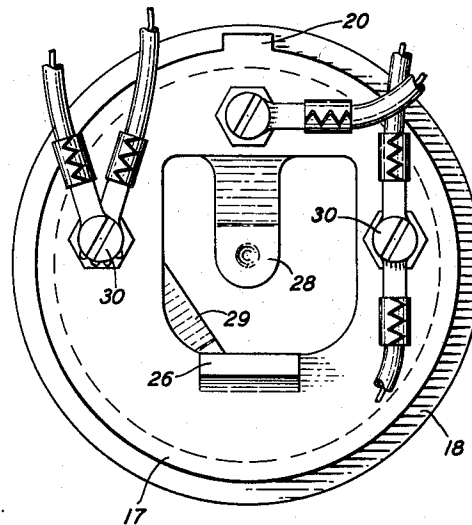


FIG. 3



INVENTOR
W. G. TURNBULL
BY *J. Hunter*
ATTORNEY

UNITED STATES PATENT OFFICE

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SUPPORT AND CORD ASSEMBLY FOR HAND
TELEPHONES

William G. Turnbull, Jr., Summit, N. J., assignor
to Bell Telephone Laboratories, Incorporated,
New York, N. Y., a corporation of New York

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4 Claims. (Cl. 179—103)

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This invention relates to hand telephones and more particularly to such telephones of the type having transmitter and receiver units mounted at opposite ends of a handle.

One object of the invention is to simplify the construction and reduce the cost of hand telephones.

Another object of this invention is to facilitate the assembly and repair of such telephones.

A further object of this invention is to expedite the locking of the cord to the handle of a hand telephone.

In one illustrative embodiment of this invention, a hand telephone comprises a handle having hollow portions at opposite ends for receiving the transmitter and receiver units, the handle having also an aperture therein, for example at the transmitter end, through which the telephone cord extends.

In accordance with one feature of this invention, a removable terminal support is fitted within the transmitter end of the handle, the support mounting spring contacts for engaging the transmitter unit and having thereon terminals through which electrical connection is established between the spring contacts and the cord conductors. The support is seated upon and keyed to a shoulder within the handle and is provided with a surface upon which the transmitter unit is seated. This unit and the support are locked in position by a transmitter cap or mouthpiece affixed, as by threading, to the transmitter end portion of the handle.

In accordance with another feature of this invention, the cord is provided with a head adapted to abut an inner wall portion of the handle and the support is provided with a wedge-shaped extension constructed and arranged to bear against the head upon the cord and force it against the inner wall portion mentioned, when the support is inserted into the transmitter end portion of the handle.

In accordance with a further feature of this invention, the head above-noted is formed upon a sleeve or grommet securely affixed upon the cord, the grommet being of a resilient wear resistant material and extending through the aperture through which the cord passes, whereby the grommet protects the cord against damage by contact with and rubbing over the aperture edges. The invention and the above-noted and other features thereof will be understood more clearly and fully from the following detailed description with reference to the accompanying drawing, in which

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Fig. 1 is a sectional side view of a hand telephone illustrative of one embodiment of this invention;

Fig. 2 is a plan view of the terminal, contact spring and support assembly included in the hand telephone illustrated in Fig. 1; and

Fig. 3 is a bottom view of the assembly shown in Fig. 2.

Referring now to the drawing, the hand telephone therein illustrated comprises a hollow handle 10, for example molded from thermoplastic or phenol plastic material, having integral cup-shaped portions 11 and 12 at opposite ends for receiving the receiver and transmitter units 13 and 14 respectively.

The receiver unit 13, which may be of the construction disclosed in the application, Serial No. 704,483, filed October 19, 1946, of Edward E. Mott, is seated upon an annular internal shoulder 15 in the portion 11 and is locked or clamped in place by an earpiece 16 threaded upon the portion 11.

The transmitter unit 14, which may be of the construction disclosed in Patent 2,527,159 issued October 24, 1950, to Ralph R. Stevens, is seated upon a cup-shaped support 17 having a flange 18 seated in turn upon an internal annular shoulder 19 in the portion 12, the portion 12 and flange 18 having a cooperating slot 20 and key 21 for locating the support and preventing rotation thereof. The transmitter unit and support are locked or clamped in place by a transmitter cap or mouthpiece 22 threaded upon the portion 12 of the handle.

The hand telephone handle is provided at the transmitter end with an aperture through which a multiconductor cord assembly extends. This assembly comprises a rubber jacketed cord 23 and a sleeve or grommet 24 secured upon the cord jacket and having an enlarged portion or head 25 which abuts an inner wall portion of portion 12. The sleeve or grommet is of a flexible, wear resistant material such as polychloroprene, e. g. materials known commercially as neoprene, and is firmly affixed to the cord jacket as by cementing or vulcanizing.

As shown clearly in Figs. 1 and 3, the support 17 has extending from the base thereof an integral, wedge-shaped arm or cross piece 26 which engages the head 25 of the grommet 24 and, when the support 17 is inserted into the portion 12, forces the head against the internal wall portion of the portion 12 which it abuts. Thus, the cord is securely and readily anchored in position upon assembly of the hand telephone.

Also, because of its wear resistant character, the grommet 24 protects the cord 23 and prevents damage thereto at regions adjacent the aperture in the handle through which the cord extends.

Affixed to the support 17, as by internally tapped eyelets 27, are contact springs 28 and 29 which resiliently engage terminal contacts 31 upon the transmitter unit 14. Certain of the cord conductors are connected to the contact springs by way of the eyelets, being affixed thereto by screws 30 threaded into the eyelets.

It will be appreciated that the hand telephone may be readily assembled and repaired. For example, the cord conductors may be connected to the receiver unit and to the eyelets 27 with the receiver unit and the support external to the handle. The cord and support constitute a sub-assembly fabricable as a unit and readily associated with the handle. The support 17 is easily positioned in proper place in the handle portion 12. The cord is automatically locked fixedly in place when the support 17 and transmitter unit 14 are fixed in position by threading the transmitter cap upon the handle portion 12. Additionally, inasmuch as the transmitter unit is seated upon the cup-shaped support, a fixed, preassigned spacing between the unit and the contact springs is obtained. Further, the support enables provision of a chamber of prescribed volume behind the transmitter unit where such a chamber is desired as a part of an acoustic network for controlling the response of the unit.

Although a specific embodiment of the invention has been shown and described, it will be understood that it is but illustrative and that various modifications may be made therein without departing from the scope and spirit of the invention as defined in the appended claims.

What is claimed is:

1. A hand telephone comprising a handle having a cavity therein and having also an aperture therein communicating with said cavity, a telephone cord extending through said aperture and having an enlarged portion adapted to engage an inner wall portion of the handle adjacent the inner end of said aperture, a support fitted within said cavity and having a portion for engaging said enlarged portion and locking it against said inner wall portion, said support having thereon contacts and mounting terminals for said contacts to which conductors of said cord are connected, a telephone instrument seated upon said support and having contacts engaging said first contacts, and means affixed to said handle and bearing against said instrument to lock said instrument and support on said cavity.

2. A hand telephone comprising a handle hav-

ing a cavity therein and having also an aperture therein communicating with said cavity, a seating surface in said cavity, a cup-shaped support within said cavity and seated upon said surface, contact springs on said support, terminals connected to said contact springs, a telephone instrument seated upon said support and having contacts engaging said springs, means cooperating with said handle for locking said instrument upon said support and said support against said surface, a telephone cord extending through said aperture and including conductors connected to said terminals, a member affixed to said cord and having a portion abutting an inner wall of said handle adjacent said aperture, and a wedge-shaped member extending from said support and bearing against said portion to lock it against said inner wall.

3. A hand telephone comprising a handle having a cavity therein and having also therein an aperture communicating with said cavity, a telephone cord extending through said aperture and having an enlarged portion abutting the inner wall of said handle adjacent said aperture, a telephone instrument overlying said cavity, means abutting said instrument and having a portion bearing against the inner end of said enlarged portion, and means bearing against said instrument to urge it into said cavity thereby to urge said portion of said means against said inner end of said enlarged portion of said cord.

4. A hand telephone comprising a handle having a cavity therein and having also therein an aperture communicating with said cavity, a cord extending through said aperture and having affixed thereto a resilient collar bearing against an inner wall portion of said handle adjacent said cavity, means within said cavity having a wedge-shaped portion bearing against the inner end of said collar, a telephone instrument bearing against said means, and locking means engaging said instrument to urge it against said means thereby to urge said wedge-shaped portion against said collar.

WILLIAM G. TURNBULL, JR.

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The following references are of record in the file of this patent:

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