G. H. NASH & B. B. GRACE.

TELEPHONE HANDSET.

APPLICATION FILED JULY 2, 1917.

1,298,771. Patented Apr. 1, 1919.

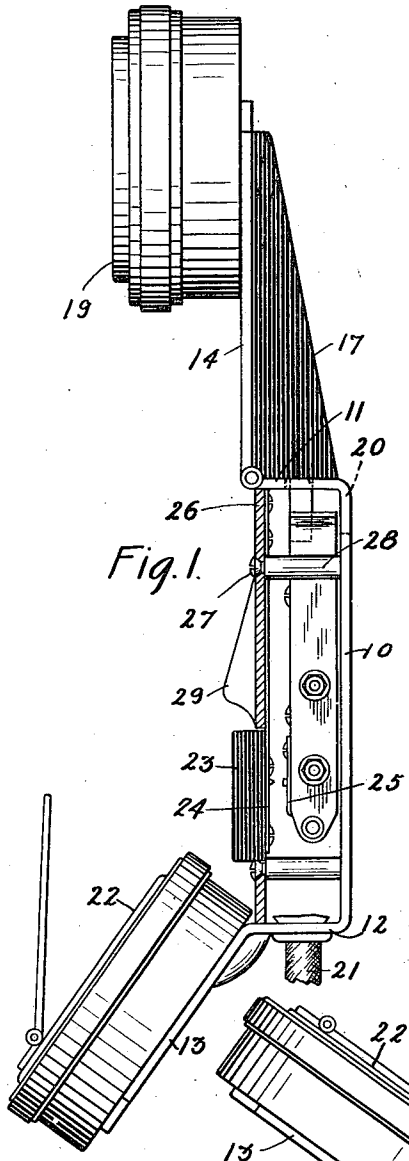


Fig. 1.

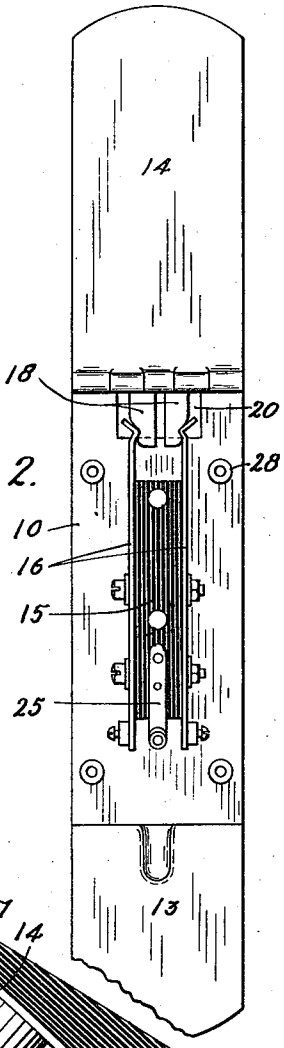


Fig. 2.

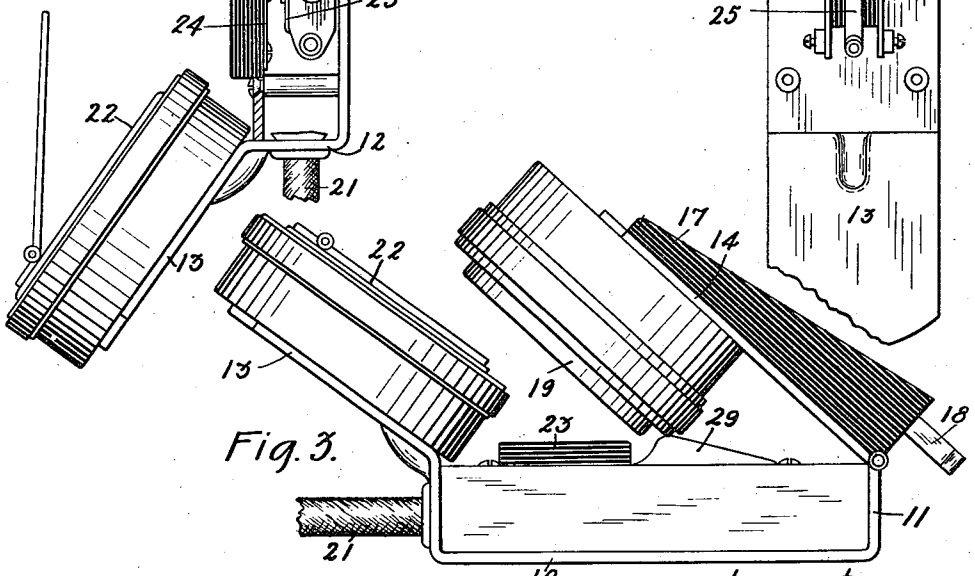


Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE HOWARD NASH, OF SIDCUP, AND BERTRAM BARNETT GRACE, OF UPMINSTER, ENGLAND, ASSIGNORS TO WESTERN ELECTRIC COMPANY, INCORPORATED, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

TELEPHONE-HANDSET.

1,298,771. Specification of Letters Patent. Patented Apr. 1, 1919.

Application filed July 2, 1917. Serial No. 178,194.

To all whom it may concern:

Be it known that we, GEORGE HOWARD NASH and BERTRAM BARNETT GRACE, subjects of the King of Great Britain, residing at Sidcup, in the county of Kent, England, and at Upminster, in the county of Essex, England, respectively, have invented certain new and useful Improvements in Telephone-Handsets, of which the following is a full, clear, concise, and exact description.

This invention relates to telephone handsets, and particularly to a handset for use with field telephones or with portable telephones of any description.

A telephone handset for use with field telephones, in addition to being an efficient instrument, should be small enough to be carried in a case or in a pocket when not in use. The usual type of handset, if made small enough to be carried in a pocket or small case, is inefficient and, in spite of its small size, is clumsy to use, owing to the distance between the receiver and the transmitter being too short for the average person.

An object of the invention, therefore, is the provision of a handset which will be fully as efficient as the ordinary type of handset, but will occupy a small space when not in use. To accomplish this end this invention provides a handset in which the supporting member for the receiver and transmitter is hinged intermediate its ends, enabling the instrument to be folded up when not in use.

Another feature of this invention is the provision of means for obtaining good circuit connections between the receiver and transmitter of a handset of the folding type, consisting of an arrangement whereby the circuit connections between the receiver and transmitter are made by what might be called a plug and jack connection.

The invention further provides a stop which limits the movement of the folded part of the instrument, thereby preventing the transmitter and receiver from striking together and also preventing the accidental depression of the circuit closing buttons with which such instruments are customarily equipped.

In the drawings illustrating the invention—

Figure 1 is a side view, partly in section, of a handset embodying the invention;

Fig. 2 is a front view with the top cover, transmitter and receiver removed; and

Fig. 3 is an elevation of the handset showing the same in folded position.

In the drawings, 10 is a supporting plate formed with end portions 11 and 12, the end portion 12 having extending therefrom a transmitter supporting plate 13. To the end portion 11 is hinged the receiver support 14. Mounted on a supporting member 10 is a block of insulating material 15 to which are fastened the spring contact members 16. These two members 16 act as and perform the functions of a jack. In addition to carrying the receiver the plate 14 carries a block of insulating material 17 in which is inserted a pair of rigid conducting members 18 separated one from the other. The members 18 are, as shown in Fig. 2, provided with oppositely disposed notches in which the free bent ends of the contact springs 16 are adapted to be forced by the resiliency of the springs. The engagement of these springs in the notches serves as a catch or lock to maintain the handle in its extended condition as it is necessary to force the springs out of the notches before the handle can be folded. The receiver 19 is electrically connected with the conducting members 18. The supporting member 10 is provided with an opening 20 therein through which the members 18 pass in moving from folded to extended position and back.

With the handset in position for use, all parts are in the position shown in Fig. 1, with the insulating piece 17 carried by the plate 14 against the end extension 11, and an inspection of Fig. 2 will show that the conducting members 18 are in electrical connection with the contact springs 16. Connection is made with the telephone circuit through the medium of the cord 21 and the circuit connections of the receiver 19 and the transmitter 22 are formed in the usual manner, but as they form no part of the present invention the details of such connections need not be described.

When in use the handset is grasped by the supporting member 10, the fingers encircling the same and depressing the rectangular insulating piece 23, thus causing connection to be made between the flexible conducting member 24 and the conducting member 25. The flexible conducting member 24 is carried by the cover plate 26 which is held on to the supporting member 10 by means of screws 27 engaging the pillars 28. When not in use the receiver 19 is folded over toward the transmitter 22 until such parts assume the position shown in Fig. 3.

In order to prevent depression of the rectangular insulating piece 23 under these conditions or the hitting of the receiver against the transmitter and the consequent injury to either or both of them, a projection 29 has been struck-up out of the metal forming the cover plate 26 and against which the edge of the receiver 19 strikes.

It will be seen from an inspection of Figs. 1 and 3 that with the instrument in position for use the distance between the receiver and transmitter is such that it may be conveniently used by the ordinary person and that when folded up the instrument occupies but a very small space and is of a convenient size to be carried in either a case or a pocket.

What is claimed is:

1. A telephone handset comprising an extensible handle, including two parts movable relative to each other, a transmitter and a receiver mounted thereon, contact springs mounted in one part of said handle, and a member carried by the other part of said handle arranged to make electrical contact with said contact springs when the handle is extended and to mechanically engage with said contact springs to hold the handle in its extended position.

2. A telephone handset comprising a folding handle, including two parts hinged together, a transmitter and a receiver mounted thereon, a switch operating lever carried by one handle part and a stop formed in the surface of said part to prevent said receiver from coming in contact with said switch operating lever when the handle parts are folded together.

3. A telephone handset comprising a jointed handle, a transmitter and receiver mounted thereon said handle having two hinged portions arranged to fold one against the other when not in use and to be extended with the said portions in alinement when in use, and contact springs carried by one of said portions and an operating member carried by the other of said portions adapted to be brought into operative relation when said portions are extended into alinement.

In witness whereof we hereunto subscribe our names this eighth day of June, A. D. 1917.

GEORGE HOWARD NASH.
BERTRAM BARNETT GRACE.