

Nov. 10, 1931.

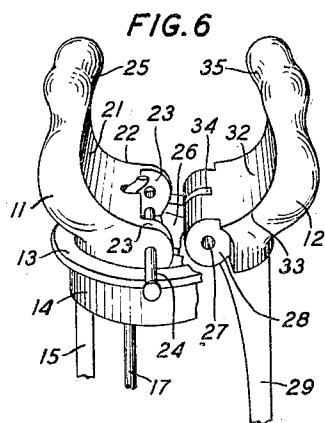
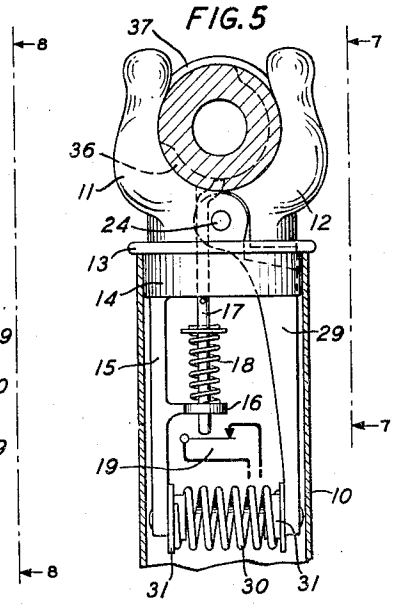
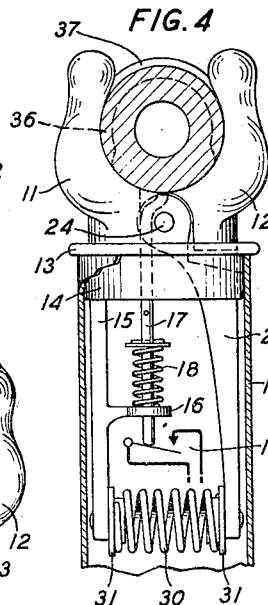
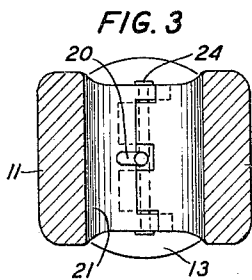
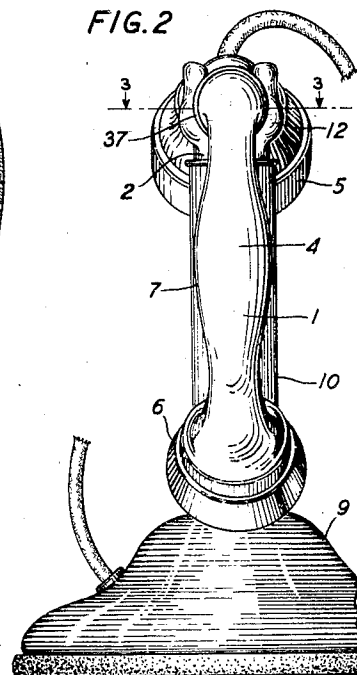
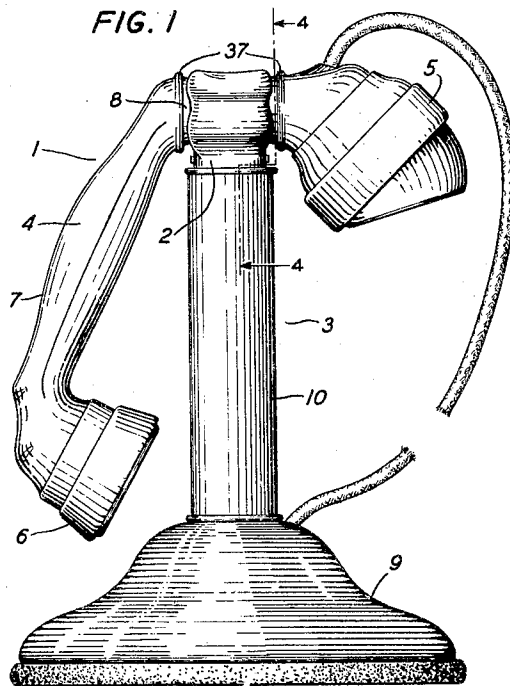
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1,831,391

TELEPHONE DESK SET

Filed April 3, 1931

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

FIG. 7

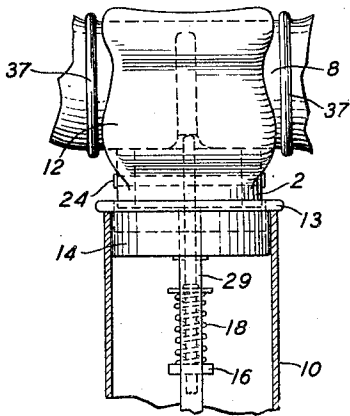


FIG. 8

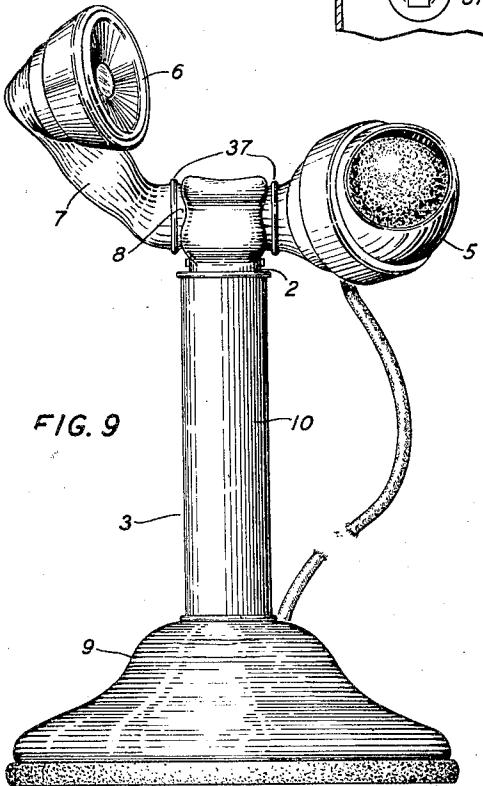
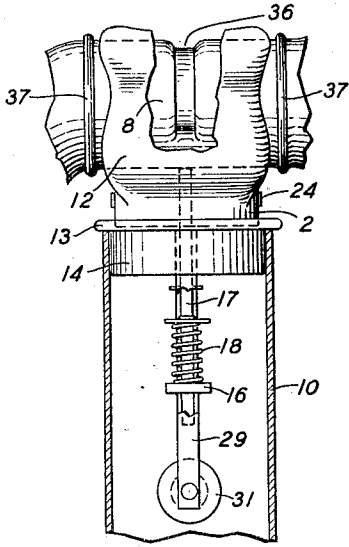


FIG. 9

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TELEPHONE DESK SET

Application filed April 3, 1931. Serial No. 527,383.

This invention relates to telephone desk sets and more particularly to desk sets employing a hand telephone.

An object of this invention is to so support a hand telephone on a telephone mounting that it may be utilized as a communication device regardless of whether it is or is not removed from such mounting.

Another object of this invention is to construct a hand telephone which is capable of use either by adjustment in position on a stable mounting, so that the hands of a user are free for other purposes while he is carrying on a conversation, or by being held in the hand of the user, the hand telephone being so dimensioned and shaped that the transmitting and receiving devices comprising the hand telephone are in either case in proper position with reference to the mouth and ear respectively of the user.

A further object is to support such a hand telephone in a cradle portion which will permit the hand set to be adjusted in position for use by the subscriber and to be maintained in adjusted position.

One feature of this invention resides in supporting means for a hand telephone which comprises a cradle having a plurality of relatively movable members between which said telephone is adapted to be gripped or clamped.

Another feature of the invention resides in the means for controlling the operation of switching mechanism for placing the hand telephone in or out of a talking circuit, said means comprising a switching member cooperating with an inclined portion, ridge or groove on the telephone.

Still another feature of this invention resides in a hand telephone comprising a common support for a plurality of telephone devices, the support comprising a plurality of angularly disposed portions one of which is shorter than the other, the shorter portion being adapted to be placed and gripped or clamped in the cradle portion of a support for the telephone.

A further feature of this invention resides in a desk stand telephone comprising a hand telephone and a mounting therefor, the

mounting comprising base, standard and cradle portions, the cradle portion comprising a plurality of spaced members between which a portion of the hand telephone is adapted to be placed and clamped, one at least of which members is movable relative to another and is controlled by a resilient member.

In a preferred embodiment, the invention takes the form of a hand telephone or hand set supported between the jaws of a pair of spaced clamping members at the upper extremity of a standard supported from a base member, preferably of considerable mass, the clamping members, standard and base comprising a desk stand. The standard encloses switching mechanism controlled by a pin or plunger projecting upwardly between the clamping members. The hand telephone comprises a receiving and a transmitting device at opposite extremities of a common support or handle, the common support consisting of angularly disposed portions of different lengths, the shorter of which is adapted to be placed between the clamping members and is provided with an inclined portion, preferably in the form of a groove, into which the switching pin or plunger extends in that portion between the clamping members. This groove is so shaped that when the telephone is turned or rotated such that the transmitter and receiver are properly positioned with reference to the mouth and ear, respectively, of a user, the switching pin will move so as to close a talking circuit for the telephone. The clamping members provide sufficiently strong gripping action on the hand telephone common support such that the latter can be turned from a vertical to any other position and remain in its changed position without the aid of the user. The arrangement is such also that, if the user desires to hold the hand set in his hand while carrying on a conversation, he may remove it from between the aforementioned members.

A more complete understanding of this invention will be obtained from the detailed description which follows and by reference to the appended drawings wherein:

Fig. 1 is an elevational view of the telephone desk set comprising this invention when the hand telephone is in inoperative or normal position;

5 Fig. 2 is a side elevational view of the telephone desk set of Fig. 1;

Fig. 3 shows a sectional view of the cradle portion of the desk set of this invention along the line 3—3 of Fig. 2 with the hand telephone removed;

10 Fig. 4 is a view along the line 4—4 of Fig. 1 of a fragment of the desk set of this invention and shows details of the switching mechanism of the desk set when the hand telephone is in the position shown in Figs. 1 and 2;

15 Fig. 5 is a view along the line 4—4 of Fig. 1 and shows details of the switching mechanism of this desk set when the hand telephone has been adjusted to a talking position;

20 Fig. 6 is an exploded view of the clamping members comprising the cradle portion of the desk set mounting forming a feature of this invention;

Fig. 7 is a view along the line 7—7 of Fig. 5 partially in section;

25 Fig. 8 is a view along the line 8—8 of Fig. 4 partially in section and partially broken away to show the switching mechanism details of the hand telephone comprising a feature of this invention; and

30 Fig. 9 is an elevational view of the telephone desk set comprising this invention when in adjusted position for the carrying on of a telephone conversation.

35 Referring now to the drawings, there is disclosed a hand telephone 1 supported in the cradle portion 2 of a telephone desk set mounting 3. The hand set comprises a handle 4 for a transmitting device or transmitter 5 and a receiving device or receiver 6. The handle consists of angularly disposed portions 7 and 8 of different lengths, the portion 8 being the shorter and preferably circular in section and having the transmitter attached thereto, and the portion 7 being the longer and having the receiver attached thereto. The portion 7 is so shaped as to be readily grasped and firmly held by the hand of a user and the portion 8 is adapted to be supported in the cradle portion 2 of the mounting and while the hand set is in either its inoperative or normal position, as shown in Fig. 1, or in its operative position, as shown in Fig. 9, is maintained substantially horizontal. The handle is formed, preferably, as a unitary structure of insulating material, for instance, of a phenol condensation product, and is dimensioned so that the transmitter and receiver are positioned properly with reference to the mouth and ear, respectively, of a user thereof regardless of whether the hand set is utilized by being held in the hand of the user or by being adjusted in position on the desk stand mounting.

65 The mounting 3 comprises a base portion

9, preferably of considerable mass to provide a stable structure, a preferably hollow, tubular standard or upright 10 carried by the base, and a cradle portion 2 comprising a pair of spaced members 11 and 12 between which the portion 8 of the hand set is supported and clamped.

The member 11 comprises a collar portion 13 having an annular flange portion 14 adapted to be thrust into the open upper extremity of the standard 10 and secured therein by suitable means, such as a screw. The member 11 comprises also the depending extension 15 which has a horizontally extending portion 16 having an aperture therein through which a switch controlling pin or plunger 17 extends. This pin 17 is encircled for a portion of its length by a helical spring 18, one extremity of which passes through said pin and the other extremity of which is supported on the extension 16. One extremity of the plunger is adjacent switching mechanism 19 (shown schematically) and the other extremity projects upwardly through a drilling 20 in the member 11 into the space between the cradle clamping members 11 and 12. The inner surface 21 of the portion 22 of the member 11 is of a contour such that the portion 8 of the hand set fits snugly thereagainst. The member 11 may be cast or formed as a unitary structure and such that extensions 23, 23 are provided, which are drilled preferably to receive a shaft or rod 24 extending between such extensions. The uppermost portion 25 of the member 11 extends preferably slightly inwardly.

The member 12, which is preferably formed as a unitary structure, is positioned in the opening 26 in the collar portion 13 of member 11 and is supported therein by the rod 24 which extends through the drilled extensions 23, 23 of member 11 and the drilling 27 in the portion 28 of member 12. It is seen, therefore, that the rod 24 acts as a shaft or axis upon which the member 12 may turn relative to the member 11 which is stationary. Cradle member 12 is provided with a depending extension 29, preferably of the same length as the extension 15 and oppositely positioned with reference thereto. Between the lower extremities of extensions 15 and 29 is a resilient member or spring 30 whose extremities encircle the anchor members 31. The spring 30 is adjusted so that it tends normally to separate the extensions 15 and 29 farther apart and hence to cause the upper portion of the member 12 to turn on the rod 24 towards the upper portion of the cradle member 11. The inner surface 32 of the portion 33 of member 12 is likewise of a contour such that the curved surface of portion 8 of the hand set fits snugly thereagainst. The portion 28 has a slot 34 in that portion extending under the mem-

ber 11 so as to provide space for the switch controlling pin or plunger 17.

When the hand set is supported in the cradle, the members 11 and 12 are thrust apart against the action of the resilient member 30 and the hand set will therefore be clamped between the members 11 and 12. The clamping force should be such only, however, as will not prevent the hand set from being rotated through an angle, for instance, from the position it occupies in Fig. 1 to that of Fig. 9, and maintained in its adjusted position. It is to be noted also that the inwardly extending curvature of the portions 25 and 35 of the members 11 and 12 respectively, insures that the hand set will not be readily dislodged from the cradle because of shocks or jars to the desk set.

The portion 8 of the hand set is provided with an inclined portion, depression or groove 36, as shown in Fig. 8 and preferably of the contour indicated by the dotted lines in Figs. 4 and 5. This groove cooperates with the pin or plunger 17 to maintain the switching mechanism in a closed or open electrical condition. When the hand set is in the position shown in Fig. 1, the upper extremity of the plunger 17 is, as shown in Fig. 4, in contact with the portion 8 at a point slightly removed from the groove, which is indicated by a dotted line in Fig. 4, and the plunger extends downwardly against the restoring force of the spring 18 to maintain the switching mechanism in an open electrical condition. When it is desired to carry on a conversation and yet have the free use of both hands, the hand set is rotated either backward or forward from the position shown in Fig. 1 to that shown in Fig. 9. By such rotation, the plunger 17 will be caused to rise in the groove or depression 36 under the restoring action of the spring 18 and the switching mechanism 19 will have assumed an electrically closed condition as is shown clearly in Fig. 5. By proper location of groove 36 and by properly contouring it, the switching mechanism will be electrically closed when the receiver and transmitter are in the desired position relative to the ear and mouth, respectively, of the user to enable a conversation to be carried on.

If it is desired to remove the hand set from the mounting and to hold it in the hand, the user need merely grasp the portion 7 of the hand set and lift it from between the cradle members 11 and 12. With the hand set removed, the plunger or pin 17 will be thrust upwardly under the restoring action of the spring 18 and the switching mechanism 19 will be closed. To insure that the hand set will be properly replaced in the mounting after use, so that the inclined portion 36 will be in alignment with the plunger or pin 17, the portion 8 of the hand set is provided preferably with the collar portions 37.

While the features of this invention have

been disclosed with reference to a specific embodiment only, it is, of course, understood that various modifications may be made in the details of construction without departing from the scope of this invention as defined in the appended claims.

What is claimed is:

1. A mounting for a hand telephone comprising a base, a standard, and spaced members carried by said standard for gripping said hand telephone, one of said members being movable relative to another thereof.

2. A mounting for a hand telephone comprising a base, a standard, spaced members carried by said standard for gripping opposite sides of said hand telephone, switching mechanism, and a switch controlling member extending into the space between said spaced members, one of said spaced members being movable relative to another thereof.

3. A mounting for a hand telephone comprising a base, a standard, spaced members carried by said standard, one of said members being movable relative to another thereof, said standard having a hollowed portion, each of said spaced members having an extension projecting into said standard, and a resilient member positioned between the extremities of said extensions for holding said extensions in spaced relationship.

4. A mounting for a hand telephone comprising a base, a standard, spaced members carried by said standard, one of said members being movable relative to another thereof, said standard having a hollowed portion, each of said spaced members having an extension projecting into said standard, the extremities of said extensions being spaced apart by a resilient member, switching mechanism in said standard, and means controlling said mechanism and extending into the space between said spaced members.

5. A mounting for a hand telephone comprising a base, a standard, and spaced members carried by said standard, one of said members being movable relative to another thereof, such standard having a hollowed portion, each of said spaced members having an extension projecting into said standard, a spring member for holding the extremities of said extensions spaced apart, switching mechanism in said standard, and means controlling said mechanism and extending into the space between said spaced members, said means comprising an elongated member encircled for a portion of its length by a restoring member.

6. A mounting for a hand telephone comprising a base, a standard, relatively movable spaced members providing a receptacle for a portion only of said telephone, said telephone having a groove in that portion, switching mechanism within said mounting, and a member cooperating with said groove to control said switching mechanism.

7. A mounting for a hand telephone comprising a supporting structure, spaced members carried by said structure and providing a receptacle for said telephone, one of said members being movable relative to another thereof, and means to control the extent of movement thereof, the telephone being clamped between said spaced members.

8. A mounting for a hand telephone comprising a supporting structure, spaced clamping members carried by said structure, one of said members being movable relative to another thereof, switching mechanism within said support, and means for controlling said switching mechanism, said means extending into the space between said spaced members.

9. A mounting for a telephone hand set comprising a supporting structure including switching mechanism, a switch controlling member extending from said structure, and spaced members carried by said structure for the reception of the telephone hand set, the hand set comprising a transmitter, receiver and a common support therefor, said members providing a seat for a small portion only of said common support, said hand set portion having an inclined portion for controlling the position of said switch controlling member.

10. A telephone hand set comprising a common supporting member for carrying a telephone device at each extremity thereof, said member comprising two angularly disposed portions of different lengths, the longer portion serving as a handle, a support for said hand set, switching mechanism in said support, and a member for controlling said mechanism, said shorter portion of said hand set having an inclined portion cooperating with said member to control said mechanism.

11. A telephone hand set comprising a common supporting member for carrying a telephone device at each extremity thereof, said member comprising angularly disposed portions of different length, and a support for said hand set comprising a pair of spaced clamping members between which the shorter portion of said hand set common supporting member is grasped.

12. A telephone hand set having a handle consisting of angularly disposed portions of different lengths, and a support for said hand set comprising spaced clamping members between which the shorter portion of said hand set handle is grasped, said mounting enclosing switching mechanism, and means for controlling said switching mechanism, which means extends into the space between said spaced members and with which said shorter portion of the handle cooperates to control the switching mechanism.

13. A telephone desk set comprising a hand set and having a handle with angularly disposed portions, and a mounting for said hand set comprising a supporting structure, spaced

clamping members carried thereby and switching mechanism therein, the spaced members providing a receptacle for one portion of said common supporting member, the position of which in said receptacle controls the switching mechanism.

14. A desk stand telephone comprising a mounting including a supporting structure, spaced clamping members carried by said structure, one of said members being movable relative to another thereof, a hand telephone clamped between said members, said hand telephone having an inclined portion in that portion thereof between said members, switching mechanism within the support, and means for controlling said switching mechanism, said means extending into the space between said spaced members and cooperating with the inclined portion of the hand telephone.

15. A telephone desk set comprising a base, a standard, a hand set cradle, a hand set to be supported in said cradle, said cradle comprising a pair of spaced members relatively movable to hold the hand set clamped therebetween.

16. A telephone desk set comprising a base, a standard, a hand set cradle, and a hand set to be supported therein, said hand set comprising a receiver and a transmitter, said cradle comprising a pair of spaced members relatively movable to hold the hand set clamped therebetween, said hand set being adjustable in position in said cradle, the receiver and the transmitter thereof being positionable against the ear and the mouth, respectively, of a user of the hand set without removing it from the cradle.

17. A mounting for a telephone hand set comprising a base, a standard carried thereby, switching mechanism therein, a switch controlling member extending from said standard, and a pair of spaced members supported by said standard for the reception of a telephone hand set, said spaced members clamping a portion of the hand set therebetween and in contact with said switch controlling member.

18. A desk stand telephone comprising a mounting, having a cradle portion comprising spaced clamping members for a hand set, and a hand set comprising a plurality of telephone devices and a common support therefor having a plurality of angularly disposed portions of different lengths, the shorter portion for engagement with said cradle and the longer portion as a handle portion to be grasped by the user of said hand set.

In witness whereof, I hereunto subscribe my name, this 31st day of March, 1931.

GEORGE E. PERREAULT.