

Nov. 4, 1930.

A. Y. DODGE

1,780,178

TELEPHONE HEAD SET

Filed April 22, 1929

2 Sheets-Sheet 1



Fig. 1.

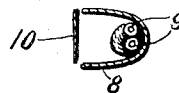


Fig. 3.

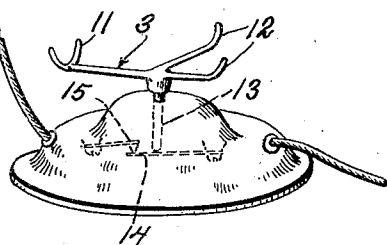
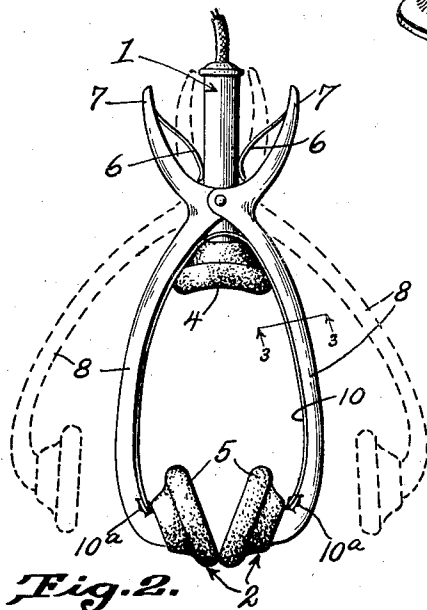


Fig. 2.

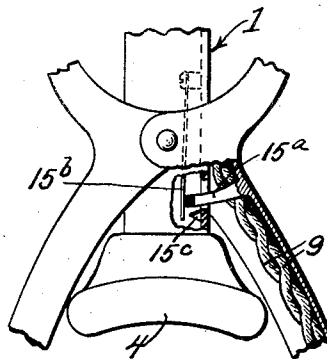


Fig. 4.

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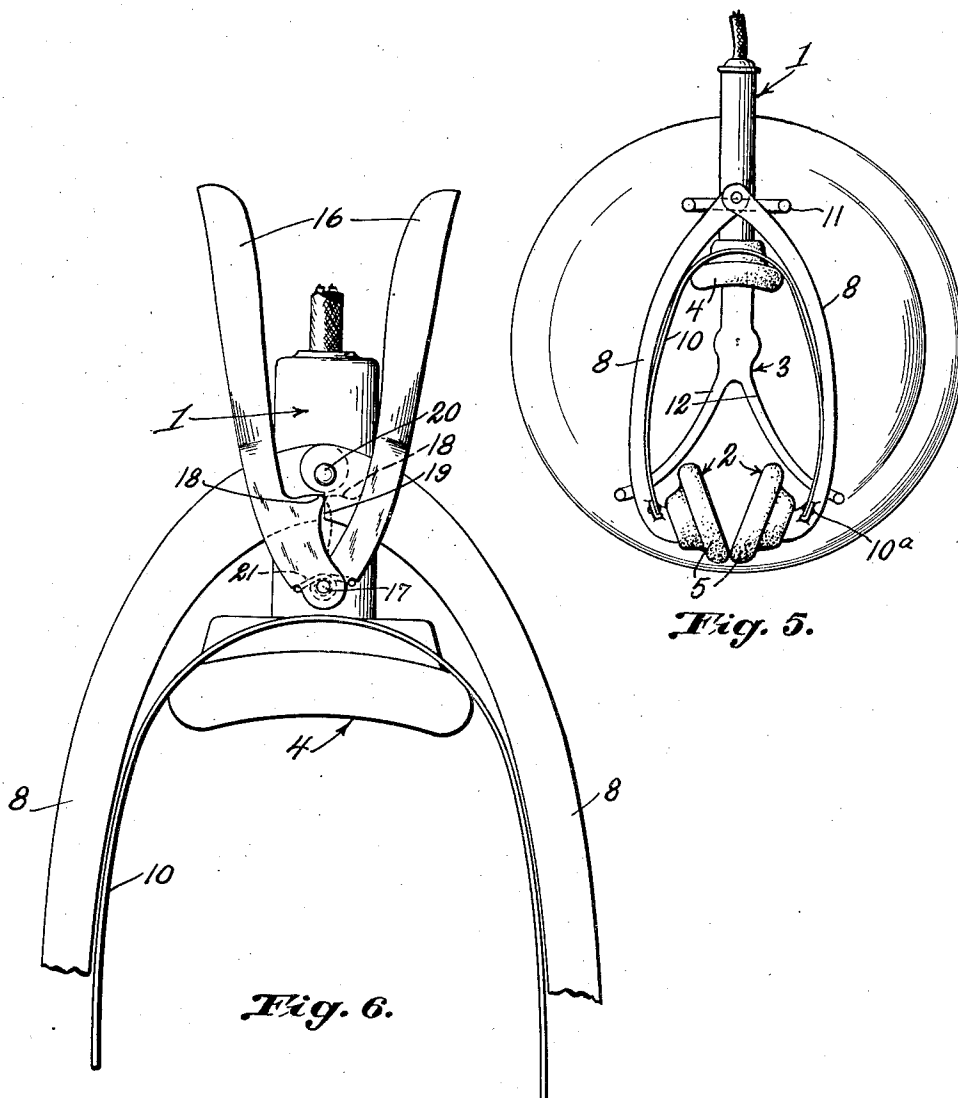
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UNITED STATES PATENT OFFICE

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TELEPHONE HEAD SET

Application filed April 22, 1929. Serial No. 357,027.

My invention relates to telephone head sets.

One of the objects of my invention is to provide a telephone head set having an improved means for excluding extraneous undesired noises from the ear of the user and also from the transmitter, which is extremely desirable under certain conditions, such as in a manufacturing establishment where the noise of the machinery seriously interferes with the use of the ordinary telephone.

A further object of my invention is to provide such a construction which will be convenient and efficient in use, simple and durable in construction and cheap to manufacture. Further objects will appear from the description and claims.

In the drawings, in which several embodiments of my invention are shown—

Figure 1 is a perspective view showing one form of my improved head set and associated parts;

Fig. 2 is an elevational view of the head set;

Fig. 3 is a section on the line 3—3 of Fig. 2;

Fig. 4 is a detailed view showing a circuit controller;

Fig. 5 is a plan view showing another form of my head set; and

Fig. 6 is a plan view showing a modified form of arm-spreading device.

Referring to the drawings in detail and first to Figs. 1 to 4, inclusive, the construction shown therein comprises a transmitter 1, a pair of ear-engaging receivers 2, pivotally mounted on the transmitter 1, and a contact-controlling rest 3 on which the head set may be placed when not in use, as indicated in Fig. 5. The transmitter 1 itself may be of any suitable construction and is provided with a sound-excluding mouth-engaging portion 4 of soft rubber or the like which is shaped to snugly engage around the mouth of the speaker to prevent extraneous noises from affecting the transmitter 1. The receivers 2 may be of any suitable construction and are provided with soft sound-excluding members 5 for fitting snugly about the ear of the speaker so as to exclude extraneous noises. These cushions may be of any suitable flexible

material, such as soft rubber. When not in use, the receiver arms are held in the full line position shown in Fig. 2 by means of leaf-springs 6 secured to the handle portions 7 respectively of the pivoted arms 8, the ends of which leaf-springs 6 bear against the body portion of the transmitter 1 to tend to hold the handles 7 away from this body portion. The wiring 9 for the receivers 2 may be carried on inside the channeled arms 8, as indicated in Fig. 3. A suitable cover 10 of flexible material may be provided to enclose the wiring 9 and give a finished appearance. This flexible cover also serves as a head strap for supporting the head set in position, as shown in Fig. 1, the strap for this purpose having pivotal connections with the receiver arms at 10^a. When not in use the head set may be placed on the vertically movable rest 3, with the transmitter 1 lying in the fork 11 and the receiver arms 8 resting on the branches 12. The construction is such that when the head set is in place on the rest it will force the rod 13 downwardly to move the contact 14 away from the contact 15 to break the circuit in the desired manner. In use, when it is desired to use the head set, the speaker grasps the handle pieces 7 forcing them together and moving the receiver arms 8 to the dotted line position shown in Fig. 2, and moves the supporting strap 10 to a position in which it will properly engage the head. The head set is then placed in the position shown in Fig. 1 in which the sound excluding portion 4 of the transmitter 1 fits snugly about the mouth and the sound excluding portions 5 of the receivers 2 fit snugly about the ears. If desired, the construction may be such that the opening movement of the arms 8 will effect the desired circuit connections. This may be done by providing a finger 15^a (Fig. 4) on one of the arms 8 which will control the position of the spring contact 15^b with respect to the fixed contact 15^c.

The construction shown in Fig. 5 is substantially the same as that just described except that here the operating handles 7 are omitted and the head strap 10 is made of springy material so tensioned that it tends to hold the

receiver arms 8 in the full line position shown. In using this form, the user will move the head strap to head-engaging position and spread the arms 8 by taking hold of them to enable the ear-engaging pieces 5 to be placed over the ears. The construction shown in Fig. 6 is substantially the same as that shown in Fig. 2 except that a somewhat different form of handle is provided, the construction being such that a slight movement of the operating handles 16 will give a relatively large movement to the receiver arms 8. For this purpose the operating handles 16 are pivotally mounted at 17 and each is provided with a projection 18 for engaging an abutment 19 on a receiver arm 8, the proposed design being such that a multiplying motion of the receiver arms 8 is obtained as will be apparent on noting the distance of the pivotal point 17 of the operating arms 16 to the point of contact 18 and the distance of the pivotal point 20 of the receiver arms 8 to the point of contact 18. A coiled torsion spring 21 is provided which acts to hold the handles 16 in expanded position, and, consequently, to hold the receiver arms 8 in contracted position.

While I have shown various forms of my invention, it is obvious that it may be embodied in other forms covered and defined by the appended claims.

I claim:

1. A transmitter and receiver construction comprising a transmitter, a receiver secured thereto comprising an ear-piece, means for yieldingly holding said ear-piece against the ear comprising a member engaging the other side of the head of the wearer and means for forcing said ear-piece and head-engaging member away from each other to facilitate positioning the ear-piece, comprising a pair of members movable toward each other to force the head-engaging member and ear-piece apart, said pair of members being close enough together to be grasped in one hand.

2. A transmitter and receiver construction comprising a transmitter, a pair of arms pivotally secured to said transmitter in front of the user's head and a pair of sound excluding ear-pieces mounted on said arms respectively, said arms having channels for the electrical conductors for the receivers.

3. A transmitter and receiver construction comprising a transmitter, a pair of arms pivotally secured to said transmitter in front of the user's head and a pair of sound excluding ear-pieces mounted on said arms respectively, and circuit control means controlled by the pivotal movement of one of said arms.

4. A unitary telephone transmitter and receiver construction comprising a transmitter, a pair of arms pivotally mounted on said transmitter, receiver mounted on one of said arms, an ear piece mounted on the other arm and spring means tending to hold the receiver and ear piece against the user's head.

5. A unitary telephone transmitter and receiver construction comprising a transmitter, a pair of arms pivotally mounted on said transmitter, receiver mounted on one of said arms, an ear piece mounted on the other arm, said arms having operating extensions extending from the pivotal mounting which may be forced together by the hand of the user to spread the arms.

In witness whereof, I have hereunto subscribed my name.

ADIEL Y. DODGE.

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