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1,479,017

J. S. TIMMONS
TELEPHONE HEAD SET
Filed Oct. 4, 1918

FIG. 1.

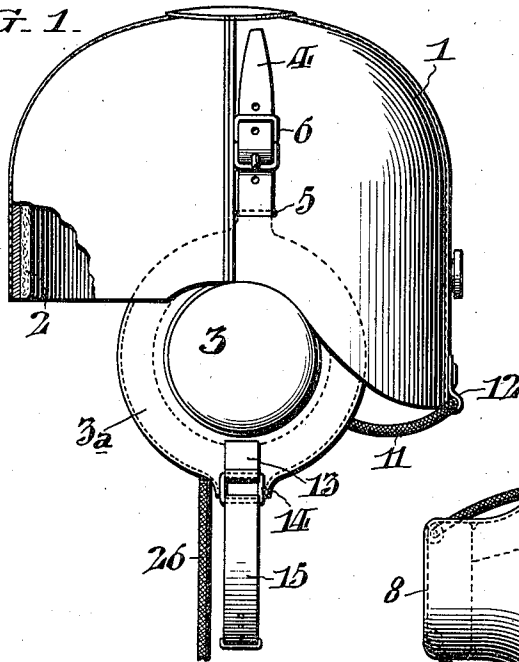


FIG. 3.

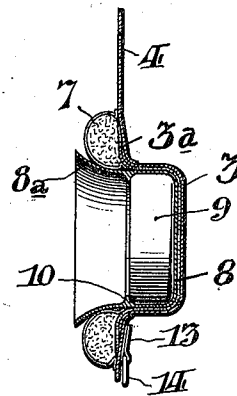


FIG. 2.

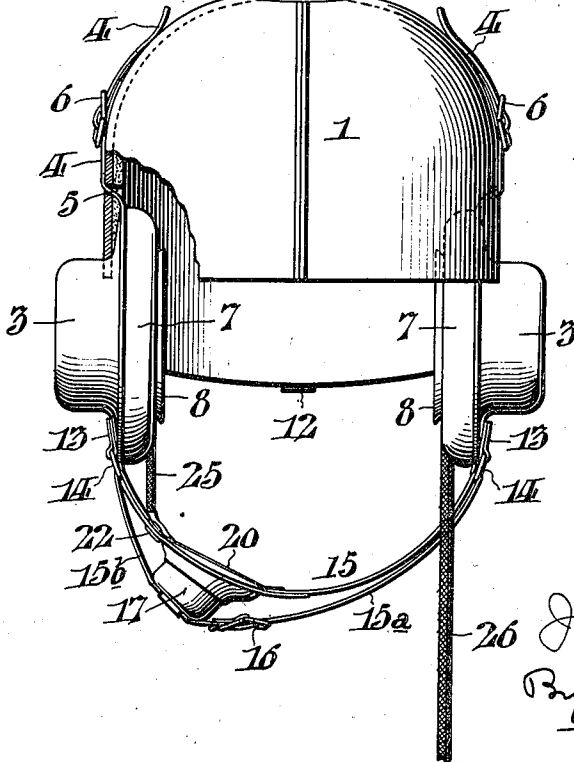


FIG. 5.

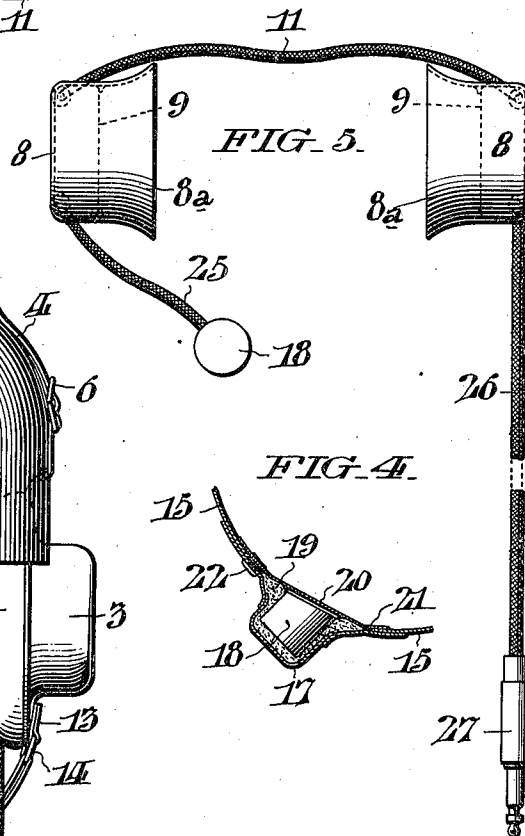
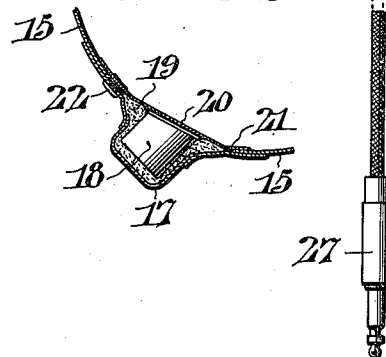


FIG. 4.



INVENTOR

John S. Timmons

By *[Signature]*

ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN S. TIMMONS, OF NEW YORK, N. Y.

TELEPHONE HEAD SET.

Application filed October 4, 1918. Serial No. 256,967.

To all whom it may concern:

Be it known that I, JOHN S. TIMMONS, a citizen of the United States, and resident of New York, county of New York, and State of New York, have invented an Improvement in Telephone Head Sets, of which the following is a specification.

My invention has for its object, the construction of a suitable telephone head set for aeroplaneists and those whose duties are in the vicinity of causes of great noise and where intercommunication by articulate speech is practically impossible.

My invention has for a further object, the construction and combination of the helmet and ear pieces in which the telephone receivers are arranged, in such manner that the ear pieces may be adjusted higher or lower to suit heads of different shapes, whereby while the crown of the head may firmly fit into the helmet the ear pieces and the receivers suspended therefrom may be adjusted to properly fit the ears of the operator.

A further object of my invention is to provide the adjustable ear pieces at their lower portions with a connecting chin strap for holding the ear pieces snugly to the ears and also for supporting a transmitter and pressing it tightly against the throat.

With the above and other objects in view, the nature of which will be more fully understood from the description hereinafter, the invention consists in the novel construction of telephone head sets as hereinafter more fully described and defined in the claims.

Referring to the drawings: Fig. 1 is a side elevation of a telephone head set embodying my invention; Fig. 2 is a front elevation of the same with a portion of the helmet broken away to show manner of suspending the ear pieces; Fig. 3 is a vertical section through the ear pieces and showing the receiver in place; Fig. 4 is a vertical section of a part of the chin strap and showing the transmitter in place thereon; and Fig. 5 is a general view showing the telephonic apparatus removed from the ear pieces and chin strap.

1 is the helmet proper and may be made of any suitable material which will provide strength and durability. In practice I prefer to employ sole leather sections mold-

ed or shaped and sewn together and the whole lined with a suitable padding material 2. The rear portion of the helmet is preferably extended down to fully cover the back of the head and thus increase the protection against injury. At each side of the helmet above the place where the ears of the wearer will come I provide slots 5 through which suspension straps 4 of the ear pieces 3 extend from inside outward, said straps having holes and secured in adjusted position by buckles 6. It will be manifest that by this construction the ear pieces 3, 3, may be held to the ears by the sides of the helmet and their vertical position may be adjusted relatively to the crown of the helmet to exactly adapt them and their receivers 9 to the ears of the operator.

The ear pieces 3 are preferably circular and formed of leather or other strong material and comprise flanged pockets having the inner faces of the flange portions provided with soft annular padding 7 which may be pressed to the sides of the head snugly around the ears. Fitting in the pockets are soft rubber cases 8 for holding the telephone receivers 9, said rubber cases having flaring bell-shaped flexible rims 8^a which, in use, completely shut out all extraneous sounds from the ears, all of which is shown in Fig. 3. At the lower portion of each of these ear pieces is a metal loop 14, suspended from the flange portion thereof by leather straps 13.

15 is a chin strap having its ends 15^a and 15^b threaded through the loops 14 of the ear pieces and, by means of a buckle 16, said ends 15^a and 15^b may be adjustably united to provide any tightness desired under the chin and as a result thereof, simultaneously apply pressure to the lower portion of the ear pieces to press them tightly to the ears. The chin strap, through the media of the ear pieces and their connection with the helmet, holds the latter firmly to the head. The chin strap furthermore, is provided with a pocket 17, preferably formed of leather, in which is arranged the transmitter 18, the same being held snugly in the pocket by padding 19 of felt or other suitable material. 20 is a soft cover, preferably of textile material, fitting over the transmitter and closing the entrance to the pocket 17; said cover having one end sewn or otherwise attached

to the strap 15 at 21 and its other end detachably attached to the strap by a snap fastener similar to those used upon gloves (Fig. 4). The use of this cover 20 is to keep the metal of the transmitter away from direct contact with the throat and to retain the transmitter in the pocket when the head set is not in use. As it is most important that the transmitter be pressed against the throat with a pressure sufficient to secure action of the muscular vibration thereof during articulate speech, I prefer that the strap end 15^b shall extend under the bottom of the wall of the pocket 17 and thus press the pocket and transmitter upward in a positive manner, the portions 15^a and 15^b of the chin strap acting as tension members thereof for applying positive inward pressure concentrated upon the transmitter, as indicated in Fig. 2.

The telephonic apparatus adapted to my improved head set is shown in Fig. 5 in which the receivers are connected by a cable 11 which is arranged at the back of the helmet and detachably secured in place by a snap loop 12 on the helmet (Fig. 1). A second cable 25 runs from the receiver 9, for the right ear, to the transmitter and a third cable 26 runs from the receiver 9, for the left ear, to the coupling or connector terminal 27 for connection with the line circuit leading to the other operator directly or through a switch board (not shown). If desired, these parts may be reversed, according as to whether the operator desires the transmitter to come to the right or left side of the throat. The rubber cases 8 have inward flanges 10 (Fig. 3) which retain the receivers in the pocket formed by the case. The use of these rubber cases 8 and flaring rims 8^a not only act to hold the receivers, but also act as dampeners against external air vibrations reaching the ears or receivers. By the construction here shown, the telephonic apparatus may be quickly introduced or removed from the head set or helmet.

In adjusting this head set to the operator, the helmet 1 is first set firmly upon the head, the ear pieces are then adjusted vertically to exactly cover the ears, and finally the chin strap is adjusted to both position the transmitter to the throat and provide the necessary pressure of both the receivers and transmitter to the head of the operator.

It will now be apparent that I have devised a novel and useful construction which embodies the features of advantage enumerated as desirable, and while I have in the present instance shown and described the preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that I do not restrict myself to the details, as the same are susceptible of modification

in various particulars without departing from the spirit or scope of the invention.

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

1. A telephone head set consisting of a helmet, combined with separate ear pieces loosely connected to the helmet with capacity for vertical and free lateral adjustment relative thereto and containing receivers, and an adjustable chin strap connected with the lower portions of the ear pieces for holding the helmet in position and the ear pieces close to the ears and in which further the ear pieces are shaped to provide flanged pockets for reception of the telephone receivers and having flanges fitting yieldingly about the ears by their own resiliency and also having annular padding secured to the inner surfaces of the flanged portions thereof, said annular padding being outside of and independent of the flexible flanges.

2. A telephone head set consisting of a helmet, combined with separate ear pieces loosely connected to the helmet with capacity for vertical and free lateral adjustment relative thereto and containing receivers, and an adjustable chin strap connected with the lower portions of the ear pieces for holding the helmet in position and the ear pieces close to the ears and in which further the adjustable connection between the helmet and ear pieces consist of upwardly extending straps from the ear pieces threaded through slotted portions in the helmet and adjustably secured to the outside of the helmet by means of buckles attached thereto, said ear pieces extending up within the side walls of the helmet.

3. A telephone head set consisting of a helmet, combined with separate ear pieces loosely connected to the helmet with capacity for vertical and free lateral adjustment relative thereto and containing receivers, and an adjustable chin strap connected with the lower portions of the ear pieces for holding the helmet in position and the ear pieces close to the ears and in which further the chin strap is provided with a pocket for reception of a transmitter and in which the ends of the chin strap are adjustably connected and extend over the pocket to press it toward the neck of the operator wearing the helmet.

4. A telephone head set consisting of a helmet, combined with separate ear pieces loosely connected to the helmet with capacity for vertical and free lateral adjustment relative thereto and containing receivers, and an adjustable chin strap connected with the lower portions of the ear pieces for holding the helmet in position and the ear pieces close to the ears and in which further the chin strap is provided with a transmitter pocket opening upward toward the helmet, and

said chin strap also provided with a soft covering attached to the chin strap and extending over the opening into the pocket.

5 5. An ear piece for a telephone head set consisting of a flanged pocket having an annular padding upon the side of the flange which is adapted to come next to the head of the operator, said pocket further provided at the top with a flexible suspension
10 strap as an extension from the flange and also provided with a connection for a chin strap at the bottom of the portion of the flange combined with a soft rubber annular projecting flange extending from the boundary of the pocket aperture and within the
15 annular padding and projecting beyond said padding, whereby the thrust of the flanged pocket toward the head of the operator is sustained by the annular padding
20 and the regular surface of the head about the ear is sealed by the flexible soft rubber annular projecting flange.

6. An ear piece for a telephone head set

consisting of a flanged pocket having an annular padding upon the face of the 25 flange, and further provided with a suspension strap at the top of the flange and a connection for a chin strap at the bottom of the flange, combined with a soft rubber case fitting the interior of the pocket as a 30 lining and having a flaring free edge extending outwardly over the padding, and a telephone receiver within the rubber case and held thereby within the pocket of the
35 ear piece.

7. A chin strap for a telephone head set consisting of an adjustable strap having a pocket opening upwardly, a detachable cover over the opening of said pocket, and a padding within the pocket to provide a 40 soft support for a telephone transmitter.

In testimony of which invention, I hereunto set my hand.

JOHN S. TIMMONS.

Witness:

PHILIP ROSE.