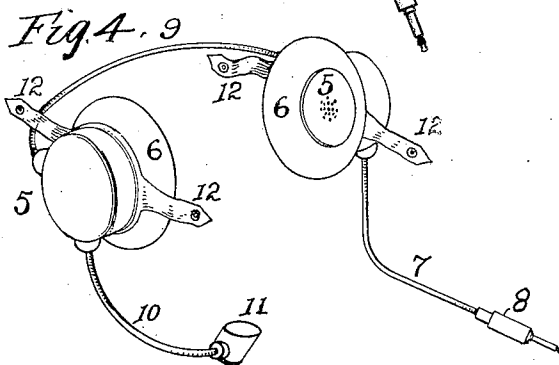
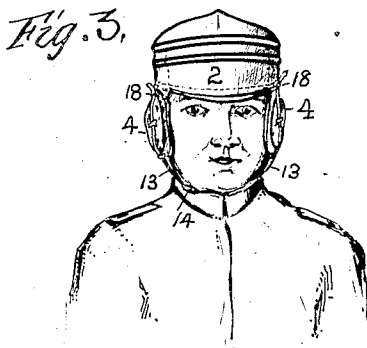
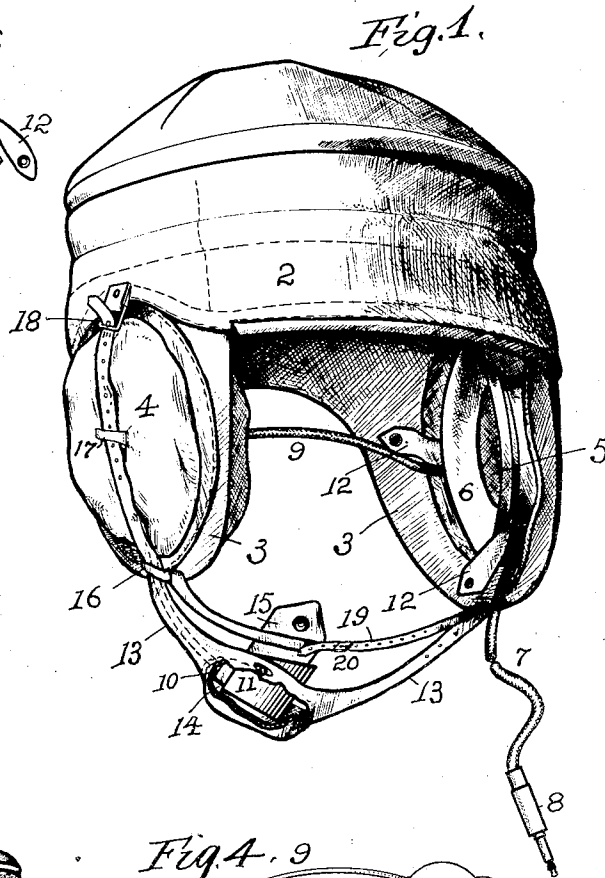
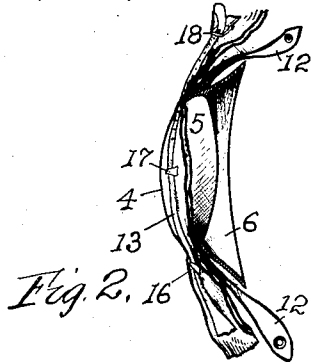


J. S. TIMMONS.
 TELEPHONE HEAD SET,
 APPLICATION FILED AUG. 28, 1918.

1,354,524.

Patented Oct. 5, 1920.



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

TELEPHONE HEAD SET.

1,354,524.

Specification of Letters Patent.

Patented Oct. 5, 1920.

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To all whom it may concern:

Be it known that I, JOHN S. TIMMONS, 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.

The object of my invention is to provide a simple and efficient telephone head set, more especially adapted to the use of aviators, where intercommunication is required between the operator and assistant, whether he be mechanic or in charge of the machine gun or bombs, and particularly for conditions of use where ordinary telephone transmitters and receivers are not suitable because of the noise and air disturbances.

In my Patent No. 1,329,029, granted Jan. 27, 1920, I have described a special construction of transmitter operable by muscle vibration of the throat of the operator when talking and unaffected by noise and air currents in the immediate environments, which type of transmitter forms a part of my head set constituting the invention of the present application.

More particularly, my object is to provide a hood or helmet having ear pockets for the receivers and a chin strap or band having a pocket for the transmitter and all adjustable to the head of the operator; and associated with said hood or helmet I arrange the receivers to fit into the ear pockets and the transmitter to fit into the pocket of the chin strap or band.

It is my object to further combine the receivers and transmitter with suitable electric conductors and a terminal coupling member, so that when they are fitted into the hood or helmet, the two receivers will be connected by a cable at the back or other part away from the face of the operator, the transmitter will be connected with one of the receivers by a cable extending along the chin strap or band, and the coupling member will be connected with the other receiver by a cable extending through the hood adjacent to the shoulder and convenient for coupling to the circuits on the aeroplane or leading to the operator or assistant, as the case may be.

My object is further to so provide the receivers with retaining devices that they may be quickly and easily attached and detached in position within the ear pockets of the helmet; and similarly, to provide the transmitter pocket with a retaining flap which may be closed to detachably retain the transmitter to the chin strap; the construction being such that the two receivers, the transmitter, the coupling member and the cables may all be quickly removed or attached to the hood or helmet and when attached, be comfortable to the wearer.

My invention also consists of improvements hereinafter described whereby the above objects and results are attained, said improvements comprising certain organization and combination of parts which are fully described hereinafter and more particularly defined in the claims.

Referring to the drawings: Figure 1 is a perspective view of a hood or helmet embodying my improvements; Fig. 2 is a detached portion broken from the hood and with a receiver therein; Fig. 3 is a front view showing the head set applied to the operator; and Fig. 4 is a perspective view showing the receivers, transmitter, the coupling member and cables removed from the hood or helmet.

2 is the crown of the hood or helmet and is provided with the downwardly extending sides or flaps 3, containing the ear pockets 4 in which the receivers 5 are placed. These side or flap portions 3 may connect at the rear by an apron portion extending down from the crown, as shown in Fig. 1. The lower parts of the sides 3, 3, are provided with sections of the chin strap 19, one of which having the buckle 20 and by which the hood or helmet may be firmly secured to the head of the wearer.

In addition to the chin strap 19, there is a second and wider chin strap 13 which contains a pocket 14 in which the transmitter 11 is placed, said pocket portion being provided with a cover flap 15 which is adapted to extend over the pocket and retain the transmitter in place, said flap being secured by a suitable snap or other fastener such as employed on gloves and other wearing apparel. The flap 15 covers the metal case

of the transmitter and prevents it from coming into direct contact with the throat of the operator, which protection is more particularly desirable where high and cold altitudes are reached. Furthermore, where there is much vibration attending the use of the head set, the employment of a soft textile or leather covering for the transmitter will prevent abrasion of the skin of the throat.

The chin strap 13 has its two ends, on either side of the pocket 14, provided with holes and adapted for adjustable connection with the buckles 18 on each side of the crown of the hood or helmet, whereby the transmitter may be held tightly to the throat and its position to the side of the throat adjusted, as may be desired. To properly guide and retain the strap 13 in position, it is threaded through loops 16 on the ear flaps 3 and loops 17 on the ear pockets 4. A further function of the adjustable strap 13 is to press the receivers 5 properly to the ears of the operator, this being accomplished by having the ear pockets 4 flexible and the strap ends 13 pressing upon the pockets across their vertical diameter. In this way, the adjustment of the strap 13 will apply pressure simultaneously to the transmitter and both receivers and automatically equalizing the pressure so that the application of these parts to the throat and ears is comfortable.

The receivers 5 may be of any suitable construction, but in the preferred from the cases are of hard rubber positioned in pliable rubber shields having flexible flaring rims 6 to fit about the ears of the operator and shut out all extraneous sounds. These receivers are furnished with bands provided with retaining tabs 12 of leather which are detachably secured to the inside of the ear flaps 3 by use of usual snap fasteners such as ordinary glove fasteners. Each receiver is preferably provided with two such tabs 12. In Fig. 1, one of the tabs is shown as attached to the ear flaps at the rear of the hood and the other tab is shown as detached to more fully bring it into view. These tabs 12 are clearly shown in Fig. 4. The flexible rubber flanges or cups 6 hold the receivers slightly away from the ears and may be adjusted as tightly as desired by pressure applied through the chin strap 13, as before described.

Referring to Fig. 4, it will be seen that the two receivers 5, 5, are connected by a rear electric cable 9, that the bottom of the receiver which comes over the right ear of the operator is connected with the transmitter 11 by electric cable 10, and that the receiver which comes over the left ear of the operator is connected with the coupling member 8 by electric cable 7. These cables 7, 9, and 10

contain the necessary insulated wires for properly coupling up the transmitter and receivers with the line, and will not need any detailed description herein.

The hood or helmet may be made of leather or other suitable strong material and is of firm construction except as to the flexibility of the ear pockets 4 on the side flaps 3; and the retaining chin strap 19 provides means for positively holding the hood or helmet firmly in position while permitting adjustment of the transmitter as to position and the application of pressure to said transmitter and receivers as before explained.

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. In a telephone head set, a hood or helmet having receiver ear pockets and an adjustable chin strap having a transmitter pocket, combined with receivers arranged in the ear pockets, a transmitter arranged in the chin strap pocket, electric conductors connecting the transmitter and receivers and provided with terminals for connection with line circuits, wherein the two receivers are directly connected together by electrical conductors, flexible electric conductors connecting one of the receivers with the transmitter and extending downward at one side of the hood or helmet and along the chin strap, and flexible electrical conductors connecting with the other receiver and extending downward independent of the transmitter and provided with a terminal coupling, whereby the terminal coupling member, receivers and the transmitter are mechanically and flexibly connected in series, so as to be easily inserted and removed from the hood or helmet and each part free to adapt itself to its own relative position without danger of displacement of the other parts.

2. In a telephone head set, a hood or helmet having receiver ear pockets and an adjustable chin strap having a transmitter pocket, combined with receivers arranged in the ear pockets, a transmitter arranged in the chin strap pocket, and electric conductors connecting the transmitter and receivers and provided with terminals for connection with line circuits, wherein the chin strap carrying the transmitter is so connect-

ed with the hood or helmet that it may be adjusted vertically to simultaneously clamp the receivers and transmitter respectively to the ears and throat of the operator.

3. In a telephone head set, a hood or helmet having receiver ear pockets and an adjustable chin strap having a transmitter pocket, combined with receivers arranged in the ear pockets, a transmitter arranged in the chin strap pocket, and electric conductors connecting the transmitter and receivers and provided with terminals for connection with line circuits, wherein the chin strap carrying the transmitter has its ends threaded through portions of each of the pockets for the receivers and adjustably connected with the crown of the hood or helmet, whereby the tightening of the chin strap applies pressure upon the transmitter and receivers to force them respectively against the throat and ears of the operator.

4. The invention specified in claim 2, wherein the chin strap has its opposite ends adjustably connected with the hood or helmet for permitting the transmitter to be adjusted to various positions on the throat and held snugly thereto.

5. In a telephone head set, a hood or helmet having receiver ear pockets and an adjustable chin strap having a transmitter pocket, combined with receivers arranged in the ear pockets, a transmitter arranged in the chin strap pocket, and electric conductors connecting the transmitter and receivers and provided with terminals for connection with line circuits, wherein the pocket in the chin strap is provided with a covering flap extending over the transmitter so as to shield the throat of the operator from direct contact with the transmitter.

6. In a telephone head set, a hood or helmet having receiver ear pockets and an adjustable chin strap having a transmitter pocket, combined with receivers arranged in the ear pockets, a transmitter arranged in the chin strap pocket, and electric conductors connecting the transmitter and receivers and provided with terminals for connection with line circuits, wherein the receivers are provided with flexible tabs having means for detachable connection with the hood or helmet beyond the ear pockets for removably positioning the receivers in the pockets.

7. In a telephone head set, a hood or helmet to fit over the head and having two receiver pockets for the ears and a chin strap provided with a transmitter pocket, combined with detachable receivers frictionally held in the ear pockets, a transmitter detachably held in the transmitter pocket, flexible electrical conductors directly connecting the two receivers and extending

transversely across the back of the hood or helmet, electric conductors extending from one of the receivers downward along the chin strap and connecting with the receiver, and a terminal connection extending from the other receiver.

8. In a head set, a hood or helmet comprising a crown having downwardly extending ear flaps provided with yielding ear pockets for receivers and a chin strap connecting with the bottom of the ear flaps for securing the hood or helmet to the operator, combined with a second chin strap provided with a pocket for a transmitter, a transmitter and two receivers for the pockets, electrical conductors connecting the transmitter and receivers and adapted for connection with line circuits, and adjustable connections for the chin strap carrying the transmitter whereby it may be independently adjusted after the hood or helmet has been secured in place upon the head of the operator.

9. The invention specified in claim 8, wherein the adjustable connection for the chin strap consists of two strap ends threaded through loops on the bottom of the ear flaps, extending over the ear pockets and adjustably attached to the crown part of the hood or helmet, whereby the adjustment of the chin strap will apply pressure to simultaneously press the transmitter and both receivers tightly to the throat and head of the operator and without otherwise affecting the attachment of the hood or helmet to the operator.

10. In a telephone head set, a hood or helmet and means for attaching it to the operator, combined with two receivers, a transmitter, means for detachably securing the receivers to the hood or helmet, a chin strap having a pocket for the transmitter for holding it against the throat of the operator, adjustable connections for the ends of the chin strap with the hood or helmet above the receivers whereby it simultaneously presses the receivers to the ears of the operator while pressing the transmitter upturned against the throat of the operator, and electrical conductors for the receivers and transmitter.

11. In a telephone head set, a hood or helmet combined with telephonic receiving means attached to the hood or helmet in position to come over the ear of the wearer, a chin strap having a pocket and adjustably secured to the hood or helmet with a part extending upward and over the telephone receiving means and having its upper end secured to the hood or helmet, and a telephonic transmitter arranged in the pocket of the chin strap whereby it may be held tightly to the throat of the operator by the chin strap which also assists in holding the

hood or helmet in place upon the head of the operator.

12. The invention specified in claim 11, so constructed that the chin strap extends
5 over the telephonic receiving means to simultaneously press said means laterally to the head of the operator when pressing the transmitter upwardly against the throat of

the operator and having the means of attachment with the hood or helmet such that 10 the position of the transmitter may be adjusted laterally relatively to the receiver.

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

JOHN S. TIMMONS.