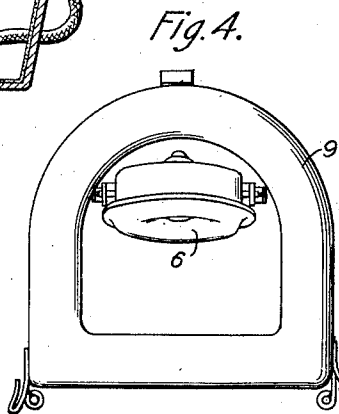
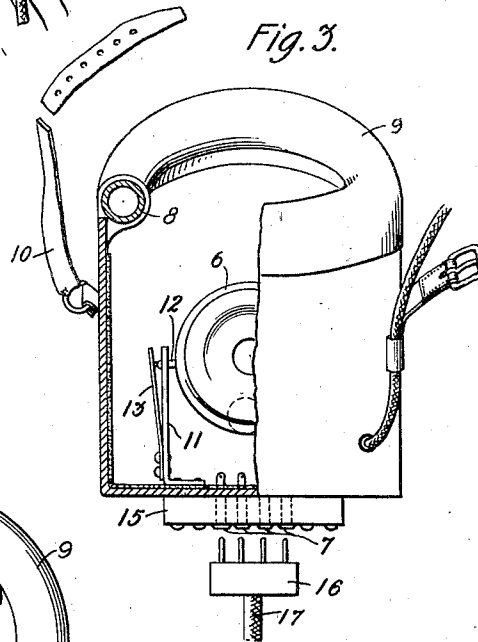
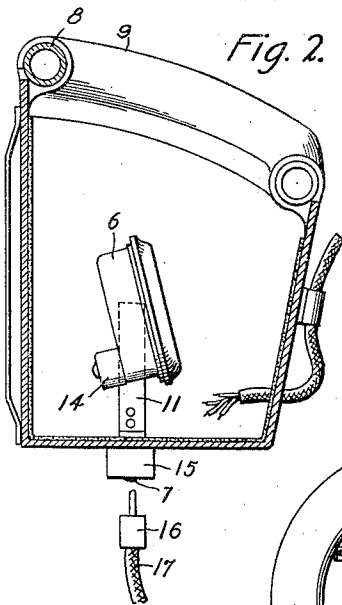
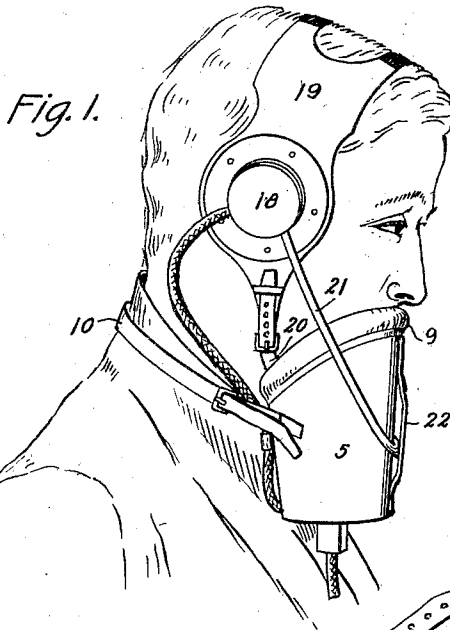


G. M. O. JENKINS.
TRANSMITTER MOUNTING.
APPLICATION FILED JAN. 22, 1919.

1,368,261.

Patented Feb. 15, 1921.



Inventor:
George M. O. Jenkins.
by *J. Roberts* Att'y.

UNITED STATES PATENT OFFICE.

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TRANSMITTER-MOUNTING.

1,368,261.

Specification of Letters Patent.

Patented Feb. 15, 1921.

Original application filed November 3, 1917, Serial No. 200,121. Divided and this application filed Jan-
uary 22, 1919. Serial No. 272,451.

To all whom it may concern:

Be it known that I, GEORGE MARK OMEGA JENKINS, a subject of the King of Great Britain, residing at Paris, France, have in-
5 vented certain new and useful Improve-
ments in Transmitter-Mountings, of which the following is a full, clear, concise, and exact description.

This invention relates to telephone appa-
10 ratus and is a division of my United States
Patent No. 1,298,217, of March 25, 1919.
More particularly this invention relates to
a type of mounting especially suitable for
use in connection with transmitters used on
15 aeroplanes for communication between the
pilot and the observer, or between various
observers.

For the different types of service in which
aeroplanes are now used, it is very often of
20 the utmost importance that the pilot and
the observer be in instant touch with each
other and able to communicate at all times.
Even though the parties are located side by
side, direct audible conversation is out of
25 the question because of the noise resulting
from the whirl of the propeller, the rush of
air and the exhaust of the motor which in
some types of machines is located adjacent
to the pilot. It is therefore advisable to
30 furnish the aviators with portable tele-
phone sets which will provide a means of
communication whereby all signals and con-
versations may be clearly and easily under-
stood.

Not only is it necessary that a system of
communication be supplied for use between
aviators, but it is also important that such
a system be operable in such a manner as
not to interfere with their other duties or
40 to encumber their movements in any way.
The pilot must have his hands free at all
times to manipulate the various control le-
vers, while the observer must also have his
hands free to operate his camera and make
45 necessary notes and sketches. Moreover, the
operation of delicate switching apparatus
would often be difficult, due to the fact that
aviators frequently protect their hands with
heavy gloves or mitts which would prohibit
50 the performing of any operation requiring a
considerable amount of dexterity of the
hands or fingers.

The object of the present invention is to
provide telephone apparatus particularly
suitable for the use of aviators or others lo- 55
cated where the outside noises make audible
conversation impracticable. A further ob-
ject is to provide telephone apparatus, the
operation of which will, to a certain extent,
be automatic, and therefore will require a 60
minimum amount of mental or physical ef-
fort on the part of the user and will not in
any way interfere with his other duties or
encumber his movements. A still further
object is to provide such apparatus suitably 65
arranged for the most efficient operation un-
der the various conditions to be experienced
in connection with aeroplane service.

To attain these objects a feature of this
invention resides in the provision of a trans- 70
mitter mounting which insures the position
of the transmitter to be that for most ef-
ficient transmission irrespective of the posi-
tion of the user. Another feature consists
in the provision of a box or casing for 75
mounting the transmitter and prevent the
latter from being affected by extraneous
noises or vibrations.

The various features of this invention
may be more clearly understood by refer- 80
ence to the accompanying drawing in which
Figure 1 illustrates the apparatus strapped
in place and the user's head lowered in the
natural position for talking; Fig. 2 is a side
view partly in section of a type of transmit- 85
ter box embodying this invention and show-
ing the method of mounting the transmit-
ter; Fig. 3 is a front view and Fig. 4 a plan
view of the transmitter box shown in Fig. 2.

Referring more in detail to the drawings, 90
each user, pilot or observer is provided with
a transmitter box 5 of leather adapted for
the mounting of a transmitter 6, and a set
of four line terminals or jacks 7. The upper
portion of box 5 is provided with a cushion 95
consisting of a tube 8 of soft rubber cov-
ered with a casing 9 of soft leather or simi-
lar material. As a result of this construc-
tion the user when talking in the transmit-
ter may press his face against the cushion 100
and in that manner, without causing any
discomfort to himself, shut out all outside
disturbances and prevent their transmission
over the circuit. A strap 10 adapted to pass

around the user's neck is provided for the purpose of holding the transmitter box in position.

The transmitter 6 is pivotally mounted 5 within the box 5 by means of a pair of brackets 11, 11, which act as a support for the contact screws 12, 12 passing through and rigidly secured in the transmitter casing. The ends of these screws, which are 10 preferably platinum pointed, extend through bearing holes in the brackets 11, 11 and engage contact points on the springs 13, 13. The brackets 11, 11 are secured in place by means of screws passing through the block 15 and since this block is of insulating material, the brackets are insulated from each other and can therefore be used as terminal connections for the electrodes of the variable resistance element which are electrically connected to the contact screws 12, 12. The transmitter swings freely in its mounting and a counterweight 14 is provided so that irrespective of the position of the transmitter box, the transmitter itself 25 will be in such a position that satisfactory transmission will result. Since the efficiency of the transmitter is only affected by movement in a plane perpendicular to the diaphragm, it is necessary to provide for 30 automatic adjustment in that plane only. Located at the bottom of the outside of the transmitter box is a block 15 of hard rubber or similar material in which are secured the jacks 7, 7. A four-conductor plug 16 adapted to engage the jack 7, 7 is connected to a 35 flexible cord 17 by means of which the necessary circuit connections are made to the other station or to intermediate apparatus.

The apparatus at each station preferably 40 includes a pair of head receivers 18 securely fastened to a headband 19 which is adapted to pass over the user's head and is secured in place by means of a strap 20 passing under the chin. Each head receiver is provided with a transmitter switch arranged 45 for connecting the transmitter into the circuit automatically when the user lowers his head to a convenient position to talk into the transmitter box. This switch is operated 50 by the switch wire 21 which extends in a loop from the two head receivers and passes under a strap 22 on the front of the transmitter box 5. The method of operation of

this switch is shown in detail in my United States Patent No. 1,298,217, of March 25, 1919, and is not described here in detail, since it forms no part of the present invention.

What is claimed is:

1. In an arrangement for communication 60 between aviators or the like, a transmitter, a sound proof box in which said transmitter is mounted, and means for pivotally mounting said transmitter within said transmitter box, said transmitter being so balanced as 65 to remain in the position for most efficient operation irrespective of the position of said transmitter box.

2. In an arrangement for communication between aviators or the like, a transmitter, 70 a pair of mounting brackets for said transmitter, and a pair of contact screws in electrical engagement with the terminals of the variable resistance element of the transmitter, said screws being secured to the casing of said transmitter and journaled in 75 said mounting brackets, said transmitter being so balanced as to remain in the position for most efficient operation irrespective of the position of said mounting brackets. 80

3. In an arrangement for communication between aviators or the like, a transmitter, a pair of mounting brackets for said transmitter insulated from each other, a pair of contact screws secured to the casing of said 85 transmitter and journaled in said mounting brackets, and a pair of contact springs adapted to bear against the end of said contact screws.

4. In an arrangement for communication 90 between aviators or the like, a transmitter having its variable resistance element terminating in a pair of contact screws, a pair of mounting brackets for said transmitter insulated from each other and provided 95 with bearing holes for said contact screws, and a pair of contact springs secured to said mounting brackets and adapted to bear against the ends of said contact screws to provide current-carrying means to said 100 transmitter.

In witness whereof, I hereunto subscribe my name this 31st day of December, A. D., 1918.

GEORGE MARK OMEGA JENKINS.