

E. H. LOWE.
TRANSMITTER.
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Patented Feb. 19, 1918.

Fig. 1.

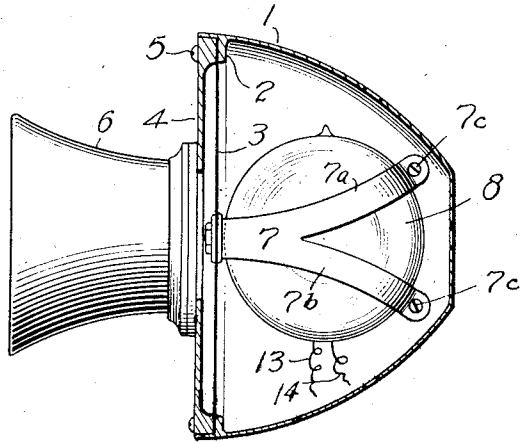
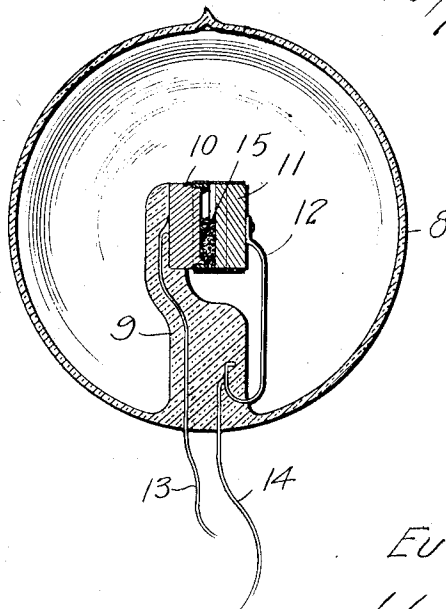


Fig. 2.



Witnesses

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TRANSMITTER.

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To all whom it may concern:

Be it known that I, EUGENE HEBER LOWE, a citizen of the United States, and a resident of Modesto, in the county of Stanislaus and State of California, have invented a new and useful Improvement in Transmitters, of which the following is a specification.

My invention relates to improvements in telephone transmitters and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of my invention is to provide a transmitter in which the resistance varying elements are disposed in a vacuum chamber, the latter being connected to the diaphragm, and transmitting the vibrations of the diaphragm to the resistance varying members.

A further object of my invention is to provide a device of the type described which is simple in construction and of few parts and which, therefore, is not easily liable to get out of order.

Other objects and advantages will appear in the following specification and the novel features of the invention will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings, forming part of this application, in which

Figure 1 is a section through the transmitter,

Fig. 2 is a section through the vacuum chamber and through the resistance elements.

In carrying out my invention I provide an exterior casing 1 of the shape shown in Fig. 1. This casing is provided with an inwardly extending annular flange 2 arranged to support a diaphragm 3, the latter being held in position by means of a cover plate 4 secured in position by means of screws 5, and which bears a mouthpiece 6.

Secured to the central portion of the diaphragm are clamping members such as that shown at 7 having branches 7^a and 7^b, the members 7^a being secured together at their ends by means of screws 7^c and the members 7^b also being secured together in a similar manner.

In Fig. 1 I have shown only one of these clamping members, but it will be understood that a similar clamping member on the opposite side is provided, the two clamping members being secured together by the screws 7^c, as stated.

Rigidly held by the clamping members is an interior casing 8 in the form of a globe which is preferably formed of glass or other suitable insulating material. The interior of this casing has the air exhausted, so as to form a vacuum. The casing bears an insulating support 9 which may be integral with the walls of the casing, as shown in Fig. 2, or which may be secured to the walls in any suitable manner.

At the inner end of the support 9 is a contact member 10 which is preferably of metal. A similar contact member 11 is carried by a spring 12 which is borne upon the support 9. A wire 13 is in electrical connection at one end with the member 10 and passes outside of the interior casing. A similar wire 14 is in electrical connection with the spring 12 and passes outside of the casing.

A variable resistance element is provided which is preferably made of granulated carbon such as that shown at 15 in Fig. 2. It will be understood that Fig. 2 shows a section through the carbon element and that it may be supported in any suitable manner.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood.

When a person talks into the mouthpiece the vibration of the diaphragm 3 will be transmitted to the interior casing 8 and the vibration of the latter will cause the elements 10 and 11 respectively to be moved toward and away from each other due to such vibration. This will cause a variation of the resistance in the carbon element 15, and hence will cause fluctuations of current in the wires 13 and 14.

I claim:—

1. A transmitter comprising an exterior casing, a diaphragm carried by the casing, an interior casing secured to said diaphragm, said interior casing constituting a vacuum chamber and resistance varying elements disposed within said vacuum chamber, one of said resistance varying elements being rigidly connected with said interior casing and the other resistance varying element having a spring connection with said casing.

2. A telephone transmitter comprising an exterior casing, a diaphragm secured thereto, a pair of clamping members secured at one end to the central portion of the diaphragm, the other ends of the clamping members being secured to each other, a

spherical interior casing held solely by said clamping members, said interior casing constituting a vacuum chamber, and resistance varying elements disposed within the vacuum chamber.

5 3. A telephone transmitter comprising an exterior casing, a diaphragm secured thereto, a pair of clamping members secured at one end to the central portion of the diaphragm, the other ends of the clamping
10 members being secured to each other, an interior casing held by said clamping members, said interior casing constituting a vacuum chamber, and resistance varying ele-
15 ments disposed within the vacuum chamber, one of said resistance varying elements being rigidly secured to the casing and the other having a spring connection therewith.

20 4. A telephone transmitter comprising an exterior casing, a diaphragm secured thereto, a pair of clamping members secured at one end to the central portion of the diaphragm, the other ends of the clamping
25 members being secured to each other, a glass globe held solely by said clamping members,

said glass globe constituting a vacuum chamber, and resistance varying elements disposed within the vacuum chamber.

5. A telephone transmitter comprising an exterior casing, a diaphragm secured there- 30 to, a pair of clamping members secured at one end to the central portion of the diaphragm, the other ends of the clamping members being secured to each other, a glass
35 globe held by said clamping members, said glass globe constituting a vacuum chamber, an insulating support carried by said globe on the interior thereof, a stationary contact member carried by said support, a movable
40 contact member disposed in registration with said stationary contact member, a spring secured to said support for supporting said movable contact member, and granulated material between said movable and
said stationary contact members.

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