

(No Model.)

C. T. BLOOMER.
TELEPHONE.

No. 514,695.

Patented Feb. 13, 1894.

Fig. 1.

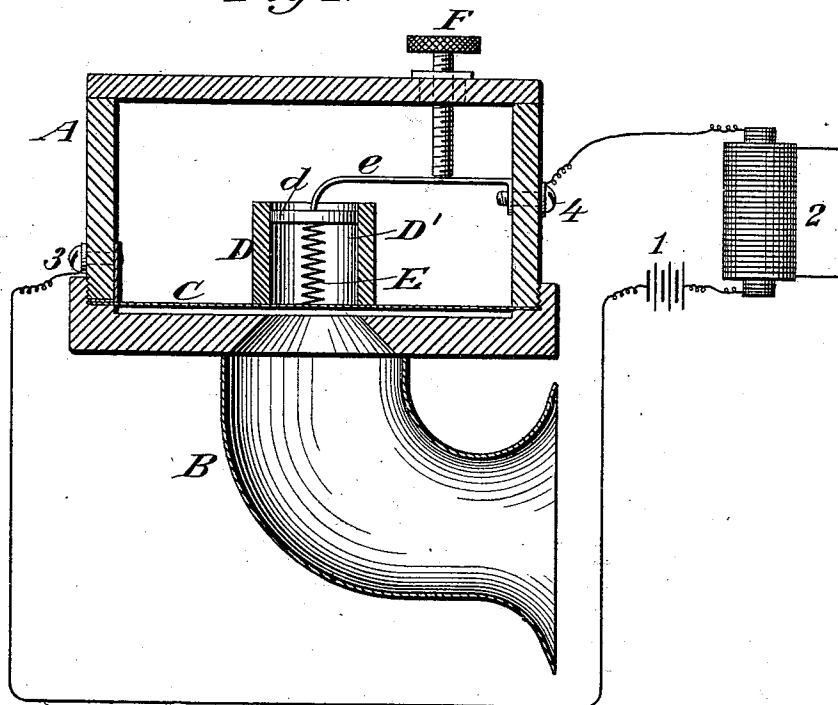
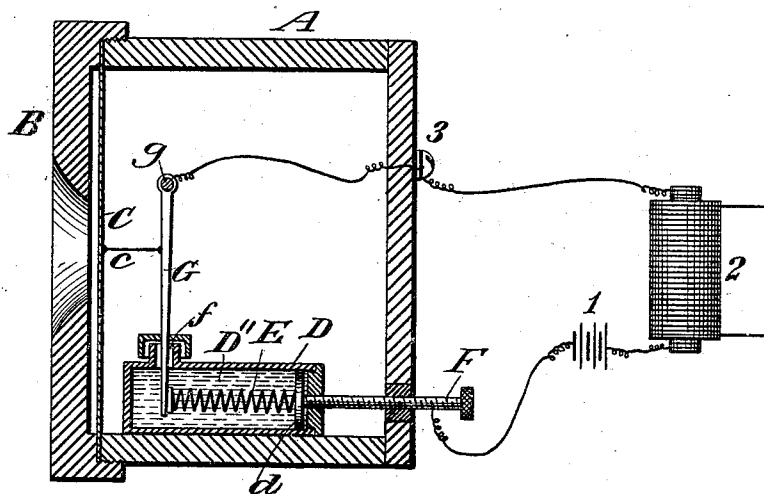


Fig. 2.



Witnesses:-

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TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 514,695, dated February 13, 1894.

Application filed May 9, 1893. Serial No. 473,498. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. BLOOMER, a citizen of the United States, and a resident of the city, county, and State of New York, have invented a new and useful Improvement in Telephonic Transmitters, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to that class of telephonic transmitters in which no electrodes are employed in the primary circuit but in which the tension of the primary circuit is varied by varying the resistance in a part of the conducting medium of this circuit.

It consists in the employment, as part of the transmitter circuit, of a conducting fluid in which is immersed a strip mechanically connected with the diaphragm.

It also consists in the employment, as a part of the transmitter circuit, of a variable resistance conductor preferably plaited, coiled or otherwise flexed and immersed in a conducting fluid, either gas or liquid.

Referring now to the drawings, in which similar parts are designated by like letters and numerals, Figure 1 is a sectional elevation of a transmitter embodying my invention. Fig. 2 is a like view of another form.

A is the casing made in any convenient form and of any suitable material.

B is the mouthpiece and C is the diaphragm. To the diaphragm, on its inner side, is fixed a casing D, preferably made of soft rubber and within this casing is, as shown, a flexible variable resistance conducting strip E, preferably coiled, plaited or otherwise flexed, which is mechanically connected with the diaphragm C. The other end of this conductor is attached to a conducting plate *d*, which serves to close the rear end of the casing D. A spring *e* attached at one end to the casing A bears with its other end upon the plate *d* and a set screw F bearing upon the spring serves to adjust the plate E. The casing D contains any suitable conducting fluid D', either gas or liquid. Fig. 1 is intended to represent the casing D filled with a conducting gas.

In Fig. 2 I have shown the casing D containing a conducting liquid D'', preferably mercury, in which is immersed the conductor E attached at one end to the plate *d* and at

its other end to the end of a multiplying lever G. This lever extends into the casing D through a suitable opening *f*, through which the liquid may be poured, and is pivoted at its other end to a rod *g* extending across the casing A. The diaphragm is mechanically connected with this lever by means of a rigid link *c*. The casing D, as shown in this figure, is detached from the diaphragm and may be made of rubber, porcelain or any suitable non-conducting substance.

The conductor E may be made of any suitable substance or substances, but I prefer to use carbon in some form and may employ a plurality of such conductors and arrange them in the casing D in any desired manner.

The transmitter circuit in Fig. 1 is from the battery 1, through coil 2, binding post 3, diaphragm C, fluid D' and conductor E, plate *d*, to battery. The circuit in Fig. 2 is from battery 1, through coil 2, binding post 3, lever G, liquid D'', plate *d*, set screw F, to battery.

My invention admits of considerable variation in the construction and arrangement of parts and I do not wish to be limited to the precise construction and arrangement herein shown and described. It is not essential in every case that the strip E be a conductor nor that it be totally submerged in the fluid.

What I claim, and desire to secure by Letters Patent, is—

1. In a transmitter, the combination of a diaphragm, a conducting fluid included in the circuit of the transmitter, a flexed flexible strip mechanically connected at one end with the diaphragm, suitably supported at its other end and immersed in said fluid, substantially as set forth.

2. In a transmitter, the combination of a diaphragm, a conducting liquid included in the circuit of the transmitter, a flexed flexible strip mechanically connected at one end with the diaphragm, suitably supported at its other end and immersed in said liquid, substantially as set forth.

3. In a transmitter, the combination of a diaphragm, a conducting fluid included in the circuit of the transmitter, a flexed flexible conductor mechanically connected at one end with the diaphragm, suitably supported at its other end and immersed in said fluid, substantially as set forth.

4. In a transmitter, the combination of a diaphragm, mercury included in the circuit of the transmitter, a flexed flexible conductor mechanically connected at one end with the diaphragm, suitably supported at its other end and immersed in said mercury, substantially as set forth.
5. In a transmitter, the combination of a diaphragm, mercury included in the circuit of the transmitter, a flexed flexible carbon conductor mechanically connected at one end with the diaphragm, suitably supported at its other end and immersed in said mercury, substantially as set forth.

CHAS. T. BLOOMER.

Witnesses:

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