

(No Model.)

H. EHRLICH.
TELEPHONE TRANSMITTER.

No. 346,846.

Patented Aug. 3, 1886.

Fig. 1

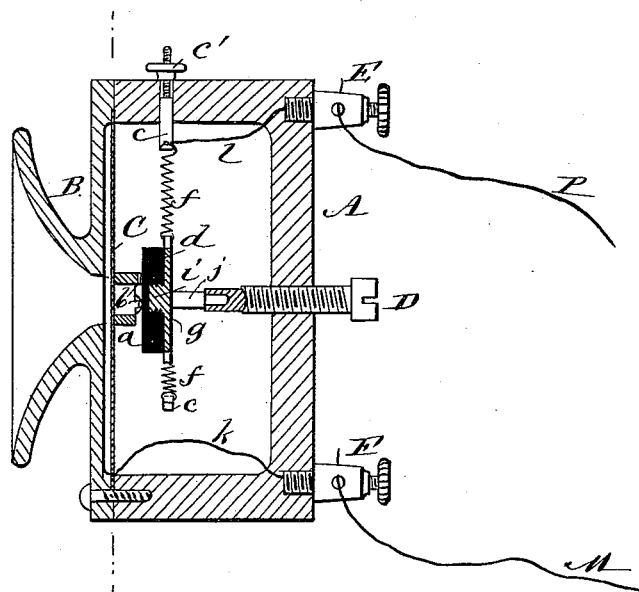


Fig. 2

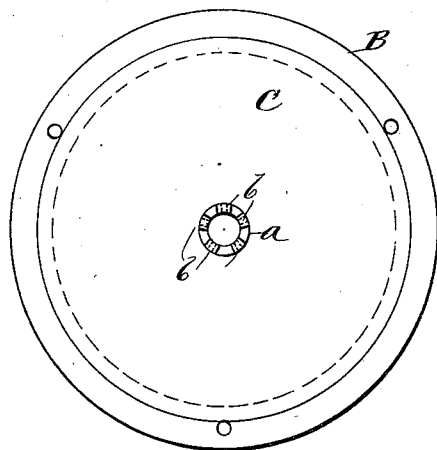
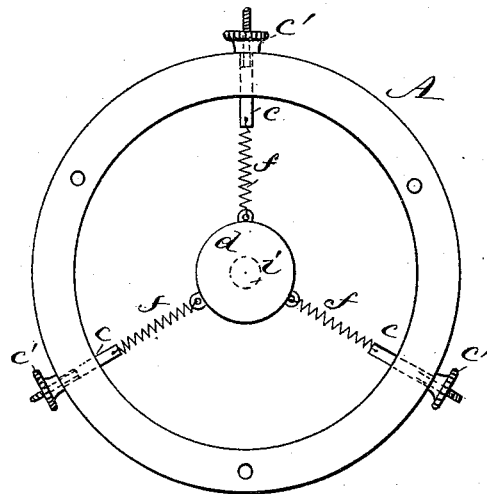


Fig. 3



WITNESSES:

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TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 346,846, dated August 3, 1886.

Application filed March 31, 1886. Serial No. 197,313. (No model.)

To all whom it may concern:

Be it known that I, HERMAN EHRLICH, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Telephone-Transmitter, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation of my new and improved transmitter. Fig. 2 is a rear elevation of the mouth-piece and diaphragm; and Fig. 3 is a front view of the box, carbon, and centering-springs, the mouth-piece and diaphragm being removed.

The invention will first be described in connection with the drawings, and then pointed out in the claims.

The box A and mouth-piece B are of the usual construction, and the diaphragm C is held between the box and mouth-piece in the usual manner. Upon the inner surface of the diaphragm is secured the button *a*, preferably cylindrical in form, and provided at its inner edge with several platinum points, *b*, for contact with the carbon *d*. The contact-points are formed by soldering or otherwise securing small curved plates of platinum to small projections formed on the edge of the button *a*, and by the use of several points arranged in the same plane slight vibrations of the diaphragm will effect as perfect contact as vibrations of considerable amplitude, so that both low and loud tones of the voice will be transmitted with equal distinctness. The carbon *d* is held in the box A by three or more radially-arranged springs, *f f*. The inner or adjacent ends of the springs are by preference connected to the metal disk *g*, which is formed or provided with a screw-stud, *i*, on which the carbon is placed. The outer ends of the springs are by preference attached to small bars *c*, which reach through apertures made in the box A, and have small thumb-nuts *c'* placed upon them, by which

the springs and the carbon may be adjusted so the latter may be easily brought to and held at the proper contiguity to the contact-points *b*.

To prevent the carbon *d* from vibrating too sensitively from the motion of the diaphragm C, I place back of it, or rather back of the disk *g*, the cushion *j*, of soft rubber. This is attached to the inner end of the screw D, fitted in the back of the box A, so that by turning the screw the pressure or resistance of the cushion may be regulated—that is, increased or diminished; so the screw D and cushion *j* also serve as means for adjusting the carbon *d* to or from the contact-points *b*.

The line-wires P M are connected with the box A, in the usual manner, by the binding-posts E and F, the latter of which is put in electrical connection with the diaphragm C by the wire *k*, the former with the carbon *d* by the wire *l*, spring *f*, and disk *g*.

By constructing the transmitter as described a very delicate adjustment of the carbon in position relatively to the contact-points *b* may be easily effected, which is necessary to the efficiency of the transmitter, and this adjustment may always be easily maintained, and there is little danger of the parts getting out of order.

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

1. The electrode *d*, held in position by flexible connections with the box, in combination with the cushion *j* and a support or holder for the cushion, substantially as described.

2. The button *a*, attached to the diaphragm C, and provided with several contact-points, in combination with the electrode *d*, held in position by yielding connections with the box and backed with the cushion *j*, and adjusting-screw D, substantially as described.

HERMAN EHRLICH.

Witnesses:

H. A. WEST,
C. SEDGWICK.