

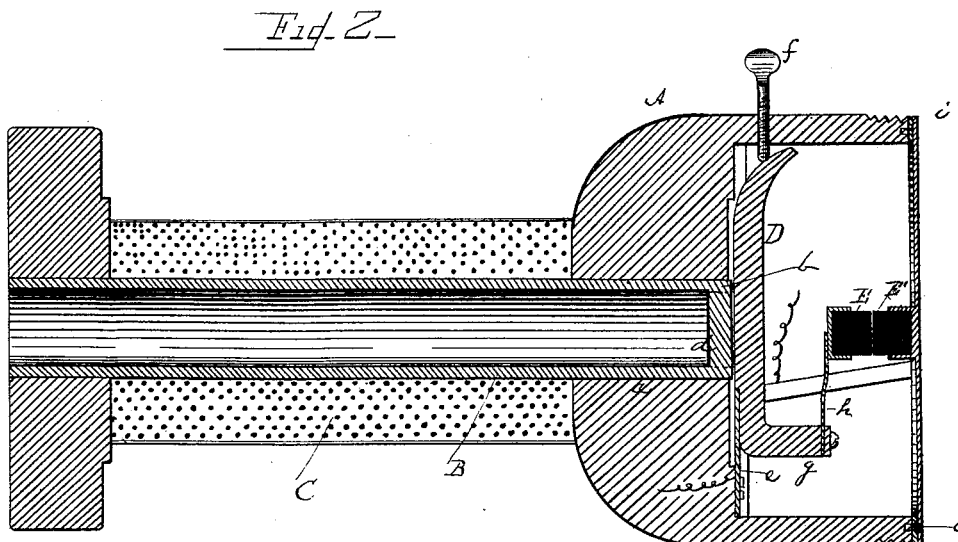
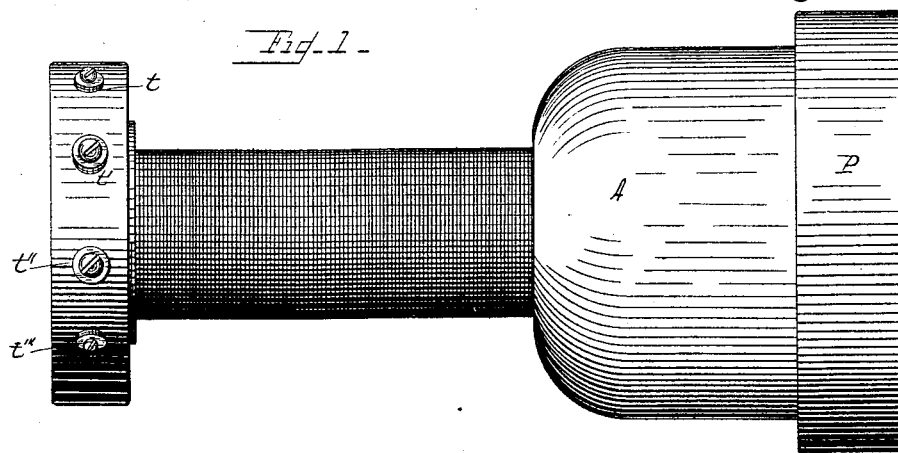
(No Model.)

2 Sheets—Sheet 1.

L. TOWNSEND.
TELEPHONE TRANSMITTER.

No. 348,430.

Patented Aug. 31, 1886.



Witnesses

G. A. Raubenschmidt,
Frank W. Pickell

Inventor

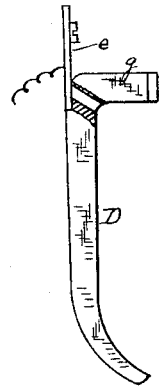
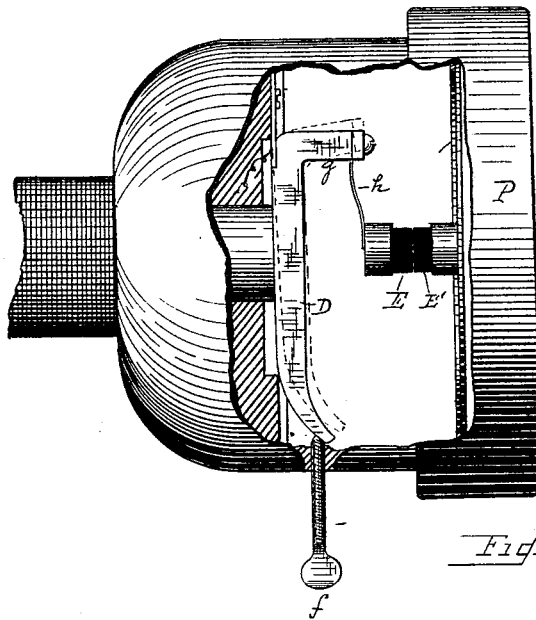
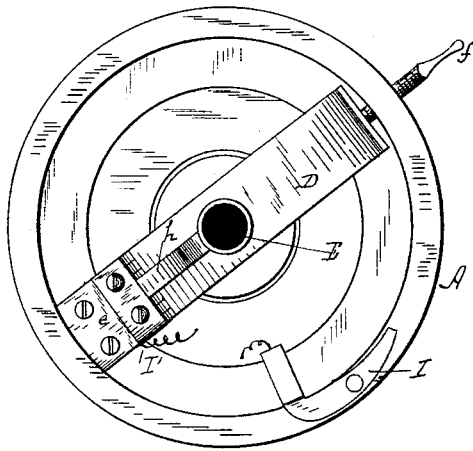
Louis Immanuel

By his Attorney *R. K. Evans.*

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UNITED STATES PATENT OFFICE.

LOUIS TOWNSEND, OF EVANSVILLE, INDIANA, ASSIGNOR OF ONE-HALF TO JOSEPH L. BAY AND WILLIAM B. WORTHEN, BOTH OF LITTLE ROCK, ARKANSAS.

TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 348,430, dated August 31, 1886.

Application filed May 10, 1886. Serial No. 201,736 (No model.)

To all whom it may concern:

Be it known that I, LOUIS TOWNSEND, of Evansville, in the county of Vanderburg and State of Indiana, have invented a new and
5 Improved Telephone-Transmitter; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

10 Figure 1 is a side elevation of the transmitter. Fig. 2 is a longitudinal sectional view on an enlarged scale. Fig. 3 is a plan view of the receiving end with the diaphragm and cap removed. Fig. 4 is a broken section showing
15 the operation of the adjusting-screw. Fig. 5 is a view of a detail.

The object of my invention is to provide a telephonic transmitter having its vibratory contacts under the influence of a strong mag-
20 netic field, and reduce the liability of derangement from rough handling and consequent impairment of the utility of the instrument.

To this end my invention consists in certain novel elements and combinations and arrange-
25 ments of devices, as hereinafter fully described, and specifically pointed out in the claims.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried
30 it out.

In the said drawings, A is a trumpet-shaped case, made of hard wood or any other desirable material, and hollowed out to receive an adjusting device and a vibratory contact-
35 point, as hereinafter set out. Inserted in the case at *a* is one end of a short soft-iron tube, which may be made of a piece of gas-pipe seven-eighths of an inch in diameter and five inches long. This soft-iron tube B forms the
40 core of an electro-magnet, completed by the helix C, wound thereon, and proper electrical connections. Within the end *b* of tube B, where it passes into the case, is inserted a short metal plug, *d*, forming a strong magnetic field. Flexi-
45 bly secured within the case by means of a yielding plate, *e*, and at right angles to the end *b* of tube B, is an adjusting-bar, D, having in this instance one end curved slightly

upward to form a bearing for an adjusting thumb-screw, *f*, while the opposite end is
50 turned upward at right angles, as seen at *g*, and affords a bearing for one end of a highly-elastic steel spring, *h*, which carries a carbon contact, E. Firmly secured over the mouth of the case by means of screws *i i* is a dia-
55 phragm, made of ordinary sheet-tin, to the center of which is secured another contact-point, E', the contacts E and E' being in operative relation, and that relation susceptible of change by the changing of the position of the
60 cross-bar D through the medium of the set-screw *f*. Over the end of the casing is fitted a cap, P, provided with a central opening, through which the sound-waves may pass.

The instrument is connected by means of
65 binding-posts *t t' t'' t'''*, the connections at posts *t t'* being for the primary or battery connections, the wire from *t* terminating in a contact against the diaphragm, as seen at I, and the wire from post *t'* being attached to the cross-
70 bar D, as seen at I'. I wind the helix C to a resistance much higher than ordinarily given—say about six hundred ohms in No. 36 wire.

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

1. In a telephone, a tubular core, B, having its end adjacent to the contacts closed, substantially as described, in combination with a helix, C, and proper electrical connections, for
80 the purpose specified.

2. The induction-coil and a proper casing, in combination with a transverse adjusting-bar, spring *e*, screw *f*, electrical connections, and vibratory contacts, substantially as described.
85

3. The rigid diaphragm, provided with the contact E', in combination with the contact E, sustaining-spring *h*, transverse adjusting-bar D, flexibly secured to the case, the induction-coil B C, and proper electrical connec-
90 tions, all constructed, arranged, and operated as set forth.

LOUIS TOWNSEND.

Witnesses:

J. W. NEXSEN,
H. P. McNAIR.