No. 887,231. PATENTED MAY 12, 1908.

E. R. CORWIN.

TELEPHONE TRANSMITTER.

APPLICATION FILED DEC. 27, 1906.

Fig. 1.

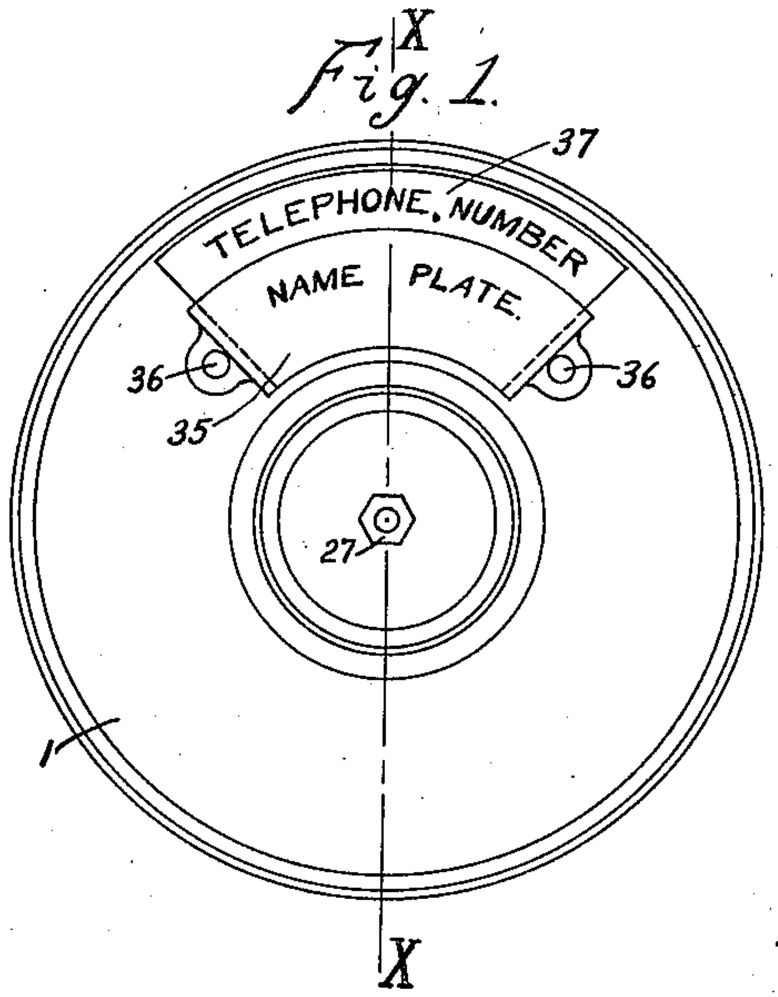


Fig. 2.

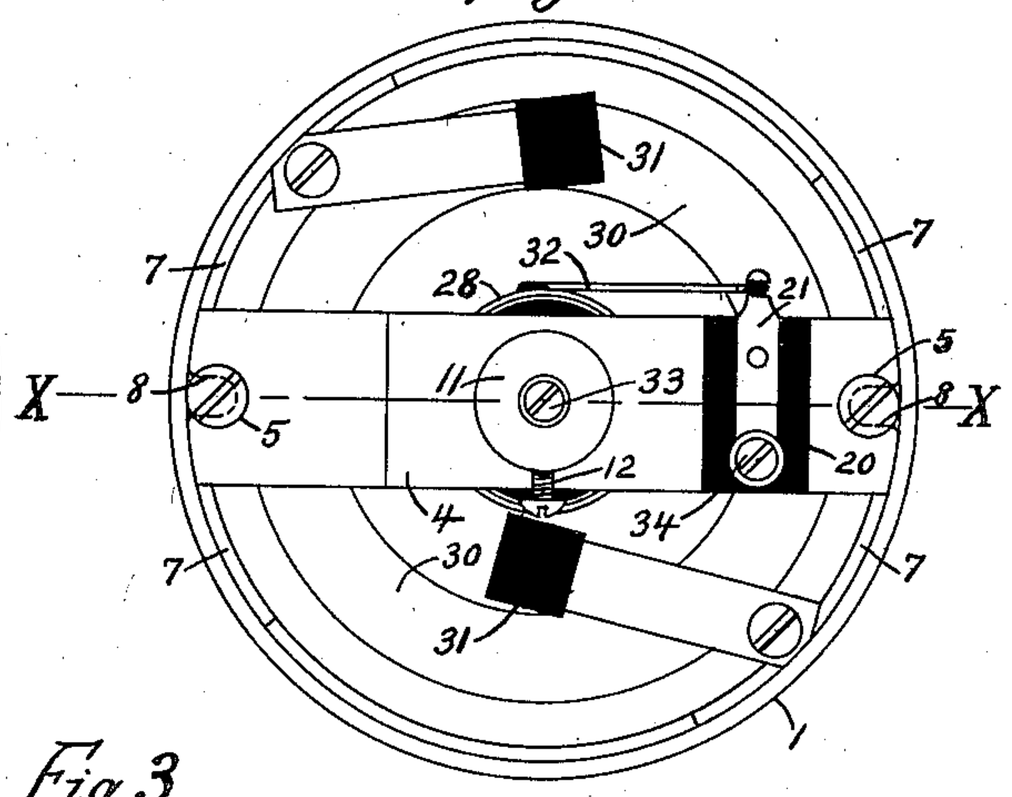


Fig. 3.

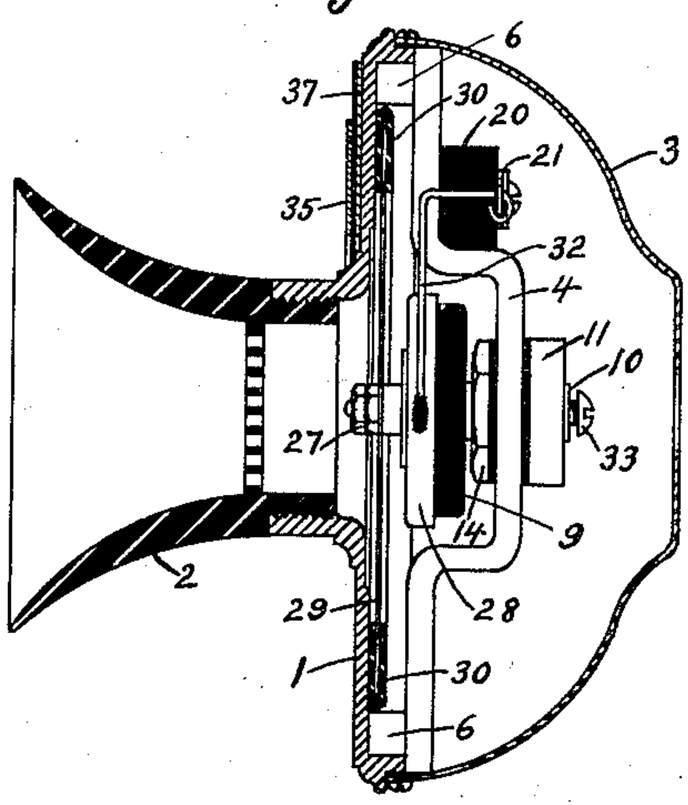
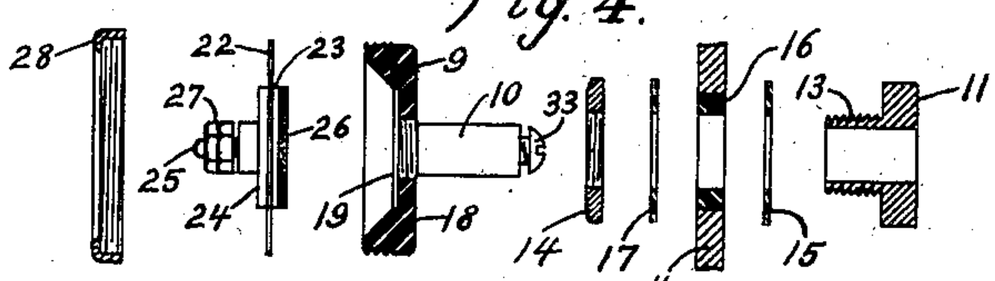


Fig. 4.



WITNESSES:

Frank L. Foidl

Charles. P. Bals

INVENTOR:

Elmer R. Corwin

BY Frederick R. Parker

ATTORNEY.

UNITED STATES PATENT OFFICE.

ELMER R. CORWIN, OF CLYDE, ILLINOIS, ASSIGNOR TO CORWIN TELEPHONE MANUFACTURING CO., OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

TELEPHONE-TRANSMITTER.

No. 887,231. Specification of Letters Patent. Patented May 12, 1908.

Application filed December 27, 1906. Serial No. 349,653.

To all whom it may concern:

Be it known that I, ELMER R. CORWIN, a citizen of the United States of America, residing at Clyde, in the county of Cook and State of Illinois, have invented a new and useful Telephone-Transmitter, of which the following is a specification, reference being had to the accompanying drawings, illustrating the preferred form of the invention.

My invention relates to transmitters for transmitting intelligence by means of electricity, the device hereinbelow described being of the granule, battery type of telephone transmitters.

The principal objects of my invention are to provide an improved and simplified construction in transmitters of the character above mentioned; to provide improved means for securing the bridge of the transmitter to the frame thereof; to provide improved electrical connections through the transmitter; to provide improved means for securing the granule-containing means to the bridge of the transmitter and for insulating the said means from the bridge; and to provide an improved electrode for the transmitter. Other objects will be apparent from the following specification.

In the drawings, Figure 1 is a front view of the transmitter herein described, with the mouth-piece removed; Fig. 2 is a back view of the transmitter with the back casing removed; Fig. 3 is a cross-sectional view of the transmitter, taken on line X—X of Figs. 1 and 2, with portions shown in elevation; and Fig. 4 is a view showing certain parts of the transmitter in separated relation, some of the parts being shown in elevation and some in cross-section taken on line X—X of Figs. 1 and 2.

Like characters refer to like parts in the several figures.

The transmitter is provided with the usual front plate 1, mouth-piece 2, and back shell or casing 3. The bridge 4, is mounted to the front plate 1 by a single screw 5 at each end of the bridge, which screws are screwed into lugs 6 6 on the back of the front plate 1, the backwardly-extending rim 7 7 being cut out to accommodate the ends of the bridge 4. Each screw 5 extends through a slot in the bridge, each slot extending from the screw to its end of the bridge, as shown at 8 8 in Fig. 2. By this construction the bridge 4 may be removed by simply removing one of the two screws 5 5 and loosening the other.

The cup 9, preferably made of hard rubber, carrying the comminuted resistance material, is rigidly mounted on the bridge 4 by the back electrode 10 which is secured to the hub 11 by a set-screw 12, the hub 11 having a smaller threaded portion 13 thereon which extends through the bridge 4 and carries a nut 14 on the inner side of the bridge. The hub 11, threaded portion 13 thereof and the nut 14, are all insulated from the bridge 4 by insulating washers 15, 16 and 17. The back electrode 10 is screwed through the back wall 18 of the cup 9 and is preferably gold plated on its contact surface 19. A rubber terminal block 20 is preferably mounted on the bridge 4 as shown and is provided with a terminal clip 21.

The front electrode comprises a flexible metallic diaphragm 22 carrying a metallic disk 23 on its inner surface, the said metallic disk being faced with a polished carbon disk 26. The metallic disk 23 is secured to the diaphragm 22 by a nut 24 screwed on the threaded stem 25 which is a part of the disk 23. The metallic diaphragm 22 is secured to the front face of the cup 9 by a threaded ring 28 which is screwed to the cup, as shown in Fig. 3. The front electrode is secured to the speaking diaphragm 29 by nuts 27 threaded on a stem 25 which extends through the diaphragm 29 as shown in Fig. 3. The speaking diaphragm 29 is preferably placed in the usual soft-rubber fold 30 and is dampened by the usual dampener buttons 31 31. A conductor 32, preferably a tinned copper wire, is soldered to the ring 28 and the metallic clip 21. The circuit through the transmitter is from the back electrode 10, through the comminuted material within cup 9, the carbon disk 26 metal disk 23 and diaphragm 22, ring 28, and conductor 32, to clip 21, the conductors leading from the transmitter being attached to the back electrode 10 and the clip 21 by means of screws 33 and 34, respectively.

A name plate 35 is secured to the front part of front plate 1, preferably by escutcheon pins 36 36 as shown in Fig. 1, so as to form a pocket or card holder with the front plate 1. In the pocket thus formed is placed a card 37 bearing the telephone number or any characteristic feature to be observed.

The number card 37 is preferably covered by a transparent card, such as celluloid, for protection, which is inserted into the card pocket in front of the number card. The number card and transparent card each extend above the name plate to near the edge of the transmitter, and are both removable.

The transmitter may be adjusted for talking purposes by adjusting the back electrode 10 in the hub 11 by means of the set screw 12, which adjusts the carbon surface 26 of the front electrode against the comminuted material in the cup 9, due to the speaking diaphragm 29 acting on the secondary diaphragm 22 through the medium of stem 25.

I do not wish to limit this invention to the exact details of construction as herein shown, as numerous changes may be made in the device without departing from the invention.

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

A telephone transmitter of the character described comprising a front plate carrying a mouth-piece, a speaking diaphragm, a bridge extending across the back of the front plate and diaphragm, a slot in each end of the bridge, a screw at each end of the bridge extending through the said slots into the front plate whereby the bridge may be removed by removing but one of the screws, a metallic hub on the outer side of the bridge, having a threaded portion extending through the bridge and suitably insulated therefrom, a nut screwed on the said threaded portion on the inner side of the bridge, a button carried by the bridge, said button having a back electrode extending through the said hub, a set-screw carried by the said hub to lock the back electrode thereto in any suitable position, a flexible secondary metallic diaphragm suitably held to the front side of the button, a front electrode carried by the said secondary diaphragm, comprising a metallic disk faced with polished carbon and having a stem extending through the speaking diaphragm, and means for securing the said stem to the speaking diaphragm.

As inventor of the foregoing I hereunto subscribe my name in the presence of two subscribing witnesses, this 20th day of December, 1906.

ELMER R. CORWIN.

Witnesses:
FRANK H. CLOIDT,
CHARLES A. BALS.