J. E. SMITH.
Telephone.

No. 201,060. Patented March 5, 1878.

Fig: 1.

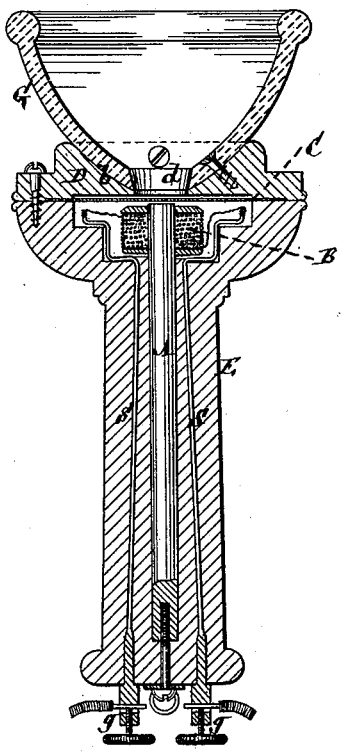
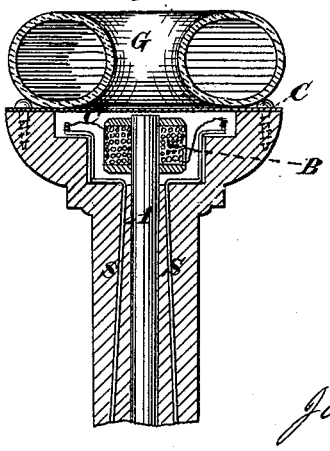


Fig: 2.



Witnesses:
Henry Eichling.
L Allen

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UNITED STATES PATENT OFFICE.

JOHN E. SMITH, OF NEW YORK, N. Y.

IMPROVEMENT IN TELEPHONES.

Specification forming part of Letters Patent No. **201,060**, dated March 5, 1878; application filed January 21, 1878.

To all whom it may concern:

Be it known that I, JOHN E. SMITH, of the city, county, and State of New York, have invented a new and useful Improvement in Telephones, of which the following is a description, reference being had to the accompanying drawing, forming part of this specification.

The use of the speaking-telephone, as at present constructed, is greatly interfered with by external sounds near the instrument.

The object of my invention is to overcome this difficulty. This I accomplish by attaching to the cover of the diaphragm, or to the diaphragm itself, a cushion, ring, or cup of india-rubber or other elastic or flexible material, which, by a gentle pressure, will fit closely against the ear, or surround the ear and fit closely against the side of the head, and thereby exclude external sounds.

Figure 1 of the drawings represents a longitudinal section of a Bell telephone with my improvement applied to the cover of the diaphragm. Fig. 2 is a similar section, showing a portion of a similar telephone with my improvement applied directly to the diaphragm itself.

Similar letters of reference indicate corresponding parts in both figures.

A is the magnet; B, the helix of wire; C, the diaphragm; D, the cap or cover, which clamps the diaphragm to the body or shell E, and which is provided with the usual orifice *b*. S S are the wires which connect the helix B with the binding-screws *g g*.

In Fig. 1, G is a cup, of india-rubber or other elastic or flexible material, fastened, by cement, screws, or otherwise, to the cover D. This cup has an opening, *d*, in its bottom directly opposite the orifice *b* in the cover D.

In Fig. 2 a shallow elastic ring or annular cushion is shown substituted for the cup G, and this ring or cushion is shown attached directly to the diaphragm C, the cover D being dispensed with, and the opening of said ring or cushion being opposite the center of the diaphragm.

When two telephones are used by one person at the same time, I prefer to have the instrument which is held constantly to the ear during communication furnished with a ring or cushion similar to that shown in Fig. 2, the hole in which may be from one-half to three-quarters of an inch in diameter. This ring may be attached to either the cover D or the diaphragm. In the other instrument, which I would alternate from the mouth to the other ear, I prefer to have the elastic material in the form of a cup, G, as represented in Fig. 1, and large enough to completely inclose the ear and make a close fit against the side of the head.

Telephones thus constructed and used will exclude from both ears all external sounds, and will consequently be much more effective.

I claim—

The combination, with a telephone, of an elastic or flexible cushion, ring, or cup, G, substantially as and for the purpose described.

J. E. SMITH.

Witnesses:
HENRY T. BROWN,
VERNON H. HARRIS.