No. 730,101. PATENTED JUNE 2, 1903.

W. J. DUNIHUE.

VOCAL GUARD FOR TELEPHONES.

APPLICATION FILED JUNE 9, 1902.

NO MODEL.

Fig. 1.

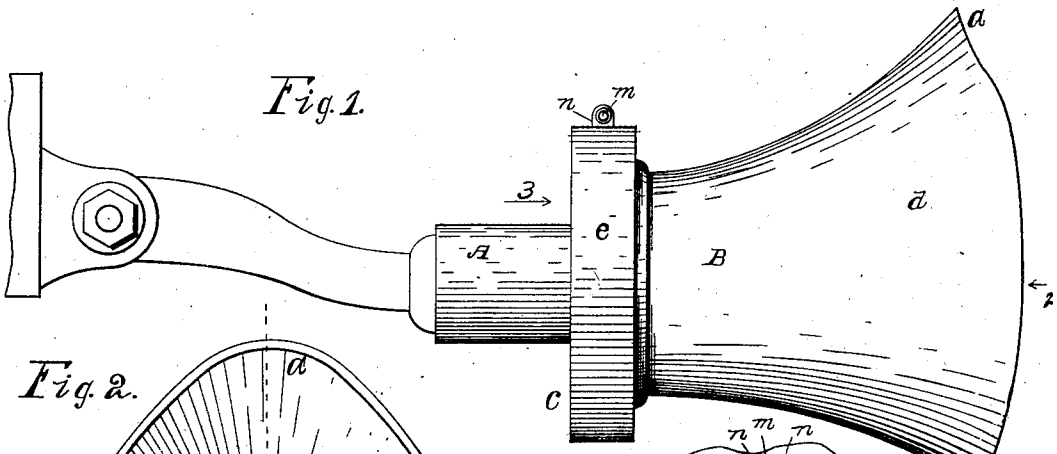
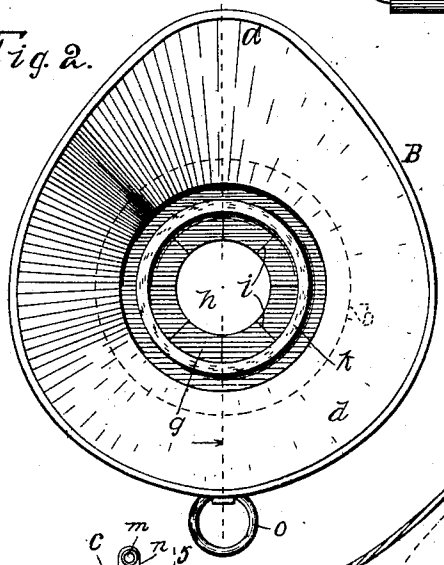


Fig. 2.



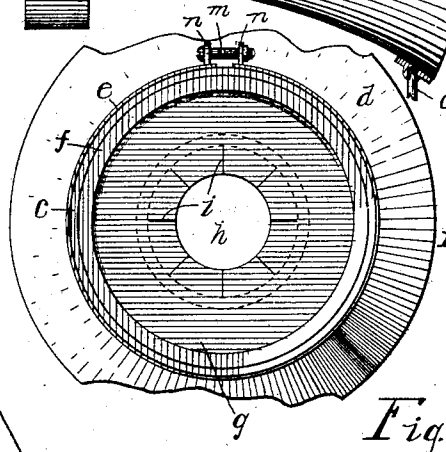


Fig. 3.

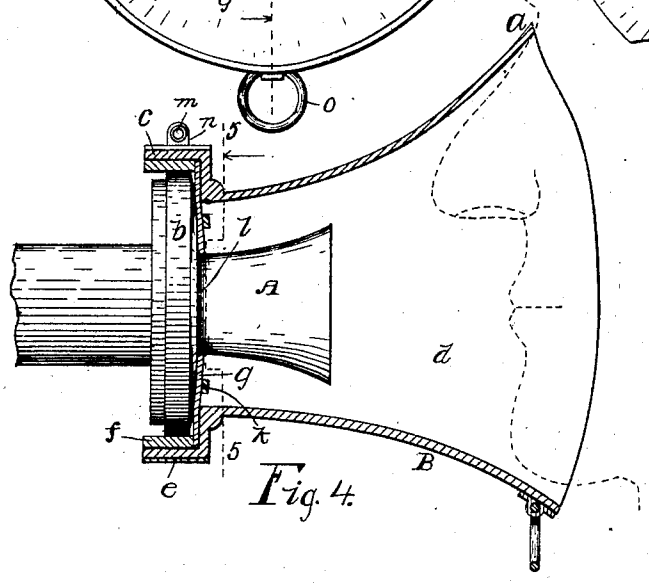


Fig. 4.

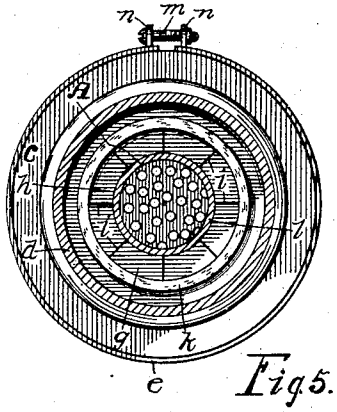


Fig. 5.

Attest:
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 730,101. Patented June 2, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM J. DUNIHUE, OF JAMESTOWN, NEW YORK, ASSIGNOR OF TWO-THIRDS TO WALLACE B. CURTIS, OF JAMESTOWN, NEW YORK, AND JAY C. D. CURTISS, OF ROCHESTER, NEW YORK.

VOCAL GUARD FOR TELEPHONES.

SPECIFICATION forming part of Letters Patent No. 730,101, dated June 2, 1903.

Application filed June 9, 1902. Serial No. 110,877. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. DUNIHUE, of Jamestown, in the county of Chautauqua and State of New York, have invented a new and useful Improvement in Vocal Guards for Telephones, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

My invention relates to devices for muffling sounds generally, but more particularly to the class of devices for muffling the voice, as while telephoning; and the object of the invention is to produce a flaring or bell-shape hollow body to guard the voice, adapted to inclose and cover the mouthpiece of the telephone at the small end and to substantially cover at the other or large end the face of the person telephoning, to the end that bystanders or persons near may not hear the communication taking place and that it may be private and heard only by the person addressed. This device is distinct and separate from the telephone, forming no part thereof, being simply an independent instrument ready at hand to be used at times or occasionally, as may be required by persons telephoning. Ordinarily the device is hung or otherwise placed conveniently near the telephone ready to be taken up and used by any person who may wish to communicate to another privately—as, for instance, in transacting the business in the office of a stock-broker or banking-house.

The invention is hereinafter fully described, and more particularly pointed out in the claims, reference being had to the accompanying drawings, forming a part of this specification.

Figure 1 is a side elevation of my improved voice-muffling device or guard placed upon the mouthpiece of the telephone, as in use. Fig. 2 is a view looking into the flaring end of the device indicated by arrow 2 in Fig. 1. Fig. 3 is a view looking into the opposite end of the device indicated by arrow 3 in Fig. 1, parts being broken away. Fig. 4 is a central longitudinal section of the device, taken on the dotted line in Fig. 2, more fully showing its connection with the coacting parts of the telephone. Fig. 5 is a transverse section of the device, taken on the broken dotted line 5 5 in Fig. 4.

Referring to the drawings, A is the mouthpiece of the telephone, *b* being the collar thereof, and B my voice-guard, placed to cover at the little end the mouthpiece, as when in use. This sound or voice muffler is made of light fibrous material, as stiff paper, papier-mâché, india-rubber, or similar substance, the nature of which acts normally to deaden or still the sound-waves of the voice. The body *d* of the guard is made broadly flaring or bell shape, as shown, adapted to cover at the large end the face of the person telephoning from and including the chin to the eyes, the upper part *a* of the body being slightly extended or elongated to receive and cover the nose. At its small end the bell or body *d* is expanded and formed with a short cylindrical extension *c* to inclose and cover the collar *b* of the mouthpiece A, said cylindrical part *c* being strengthened or stiffened by a metallic band *e*. The inner or concave side of the cylindrical part *c* is covered by a thick fibrous sound-muffling ring *f*, as of cloth or felt, which meets or comes in contact with the perimeter of the collar *b*, as a means for deadening or reducing sound-vibrations of the air about the mouthpiece.

To further quiet or destroy sound-vibrations, a diaphragm *g*, preferably of india-rubber, is placed across the annular surface at the bottom of the cylinder *c* transverse to the axis of the device, as shown, formed with a central circular opening *h* to allow it to pass over the mouthpiece A of the telephone. The diameter of the opening *h* is about equal to that of the smallest part *l* of the mouthpiece, radial kerfs or slits *i* being made to admit of the opening to expand sufficiently to allow the diaphragm, to pass over the large open end of the mouthpiece. A reinforcing-ring *k*, of india-rubber, is placed on the inner face of the diaphragm, at the outer ends of the kerfs and concentric with the opening *h*, which serves to stiffen or strengthen the diaphragm and to prevent the tearing of the latter at the ends of the kerfs. Thus constructed, when the device is put to place upon

the telephone for use the diaphragm will resume its normal shape after having been passed over the large open end of the mouthpiece, and so close down around the small part *l* of the mouthpiece, as clearly shown in Fig. 4.

When this voice guard or muffler is put to place upon the mouthpiece of the telephone, the india-rubber diaphragm will bear directly against the front side or surface of the collar *b*, as clearly shown in Fig. 4, constituting a soft or yielding packing or insulator between said collar and the adjacent part of the guard, serving to prevent vibrations and to deaden vocal sounds. Furthermore, the bell *d*, covering the lower part of the face of the speaker and itself being practically closed by the face, serves to shut out external sounds, on account of which by using this device the words spoken into the mouthpiece of the telephone in any given case may be uttered at a very low key—ordinarily just above a whisper—this being an additional safeguard against the communication being heard by others than the person addressed. Muffled or indistinct vocal sounds only can be heard by others near when one is telephoning with the aid of this instrument, the words uttered being wholly indistinguishable to them.

In constructing this vocal guard I prefer to divide the metallic band *e*, as shown in Figs. 3 and 5, and hold the separated ends near together by a tangent screw *m*, passing through opposing lugs *n n*, rigid with the respective ends of the band. By means of this screw the pressure of the metal band upon the fiberous ring *f* may be regulated to cause the latter to be compressed at times to better or more snugly fit the outer convex surface of the collar *b* of the telephone.

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

1. A voice-guard for use with telephones consisting of a flaring hollow body distinct from the telephone to be held against the face, said body being adapted to have its small end passed over and inclose the mouthpiece of the telephone, a sound-muffling ring interposed between said small end and the mouthpiece and a diaphragm of non-conducted material carried by said small end to embrace the mouthpiece.

2. A voice-guard or sound-muffler for use with telephones, consisting of a hollow body larger at one end than at the other to be held against the face, the small end of said body being open and adapted to pass over the telephone-mouthpiece, a sound-muffling ring interposed between said small end and mouthpiece and a perforated reinforced rubber diaphragm crossing said small end of the body, substantially as and for the purpose specified.

3. A device to guard the voice while telephoning, consisting of a hollow body having unequal ends, the large end being adapted to cover the face and the small end to pass over the mouthpiece of the telephone and bear against the collar thereof, said body having a cylindrical extension at its small end, provided within with a fibrous ring and without with a metallic ring, substantially as and for the purposes stated.

4. A guard for the voice while telephoning, consisting of a flaring hollow body distinct from the telephone, adapted to be held against the face, the small end of said body being open and adapted to pass over the telephone-mouthpiece, and a perforated diaphragm crossing said open end of the body, the diaphragm having slits or kerfs extending outward from the opening through it, and a reinforcing-ring on the diaphragm at the ends of the kerfs, substantially as shown and set forth.

5. A guard for the voice, consisting of a hollow flaring body adapted, at its large and small ends, to cover the face and the mouthpiece of a telephone respectively, with means for compressing the small end of the body, a diaphragm at said small end constructed to frictionally engage the mouthpiece, substantially as set forth.

6. A guard for the voice, consisting of a hollow flaring body adapted, at its ends, to cover the face and the mouthpiece of a telephone respectively, a yielding ring in the small end of the body, and a metallic band to compress the small end of the body within which said yielding ring is located, substantially as and for the purpose specified.

In witness whereof I have hereunto set my hand, this 27th day of May, 1902, in the presence of two subscribing witnesses.

WILLIAM J. DUNIHUE.

Witnesses:
EDWARD J. GREEN,
ELLA W. GREEN.