

(No Model.)

G. W. SUTTON.
MICROPHONE.

No. 561,358.

Patented June 2, 1896.

Fig. 1.

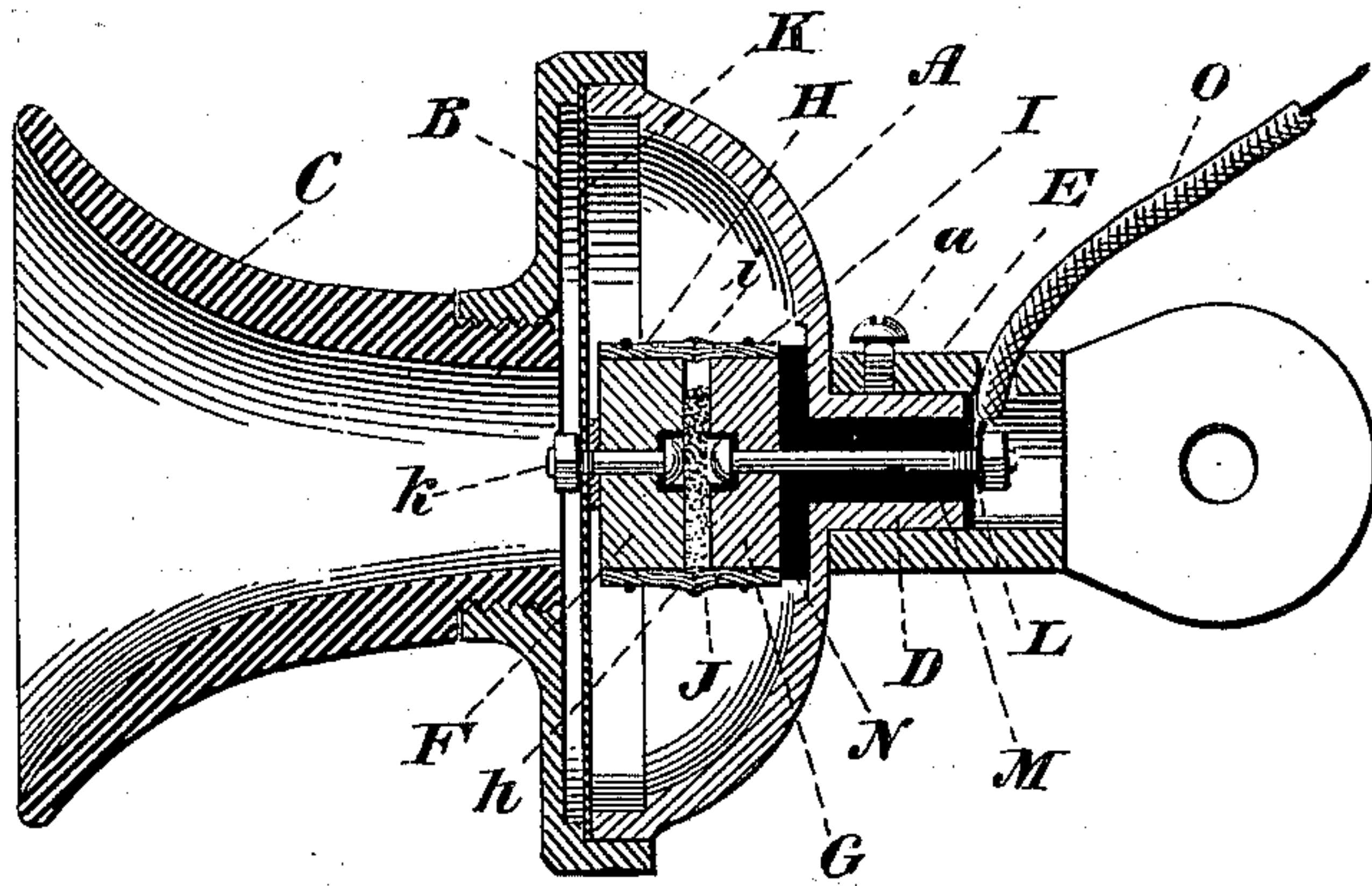


Fig. 2.

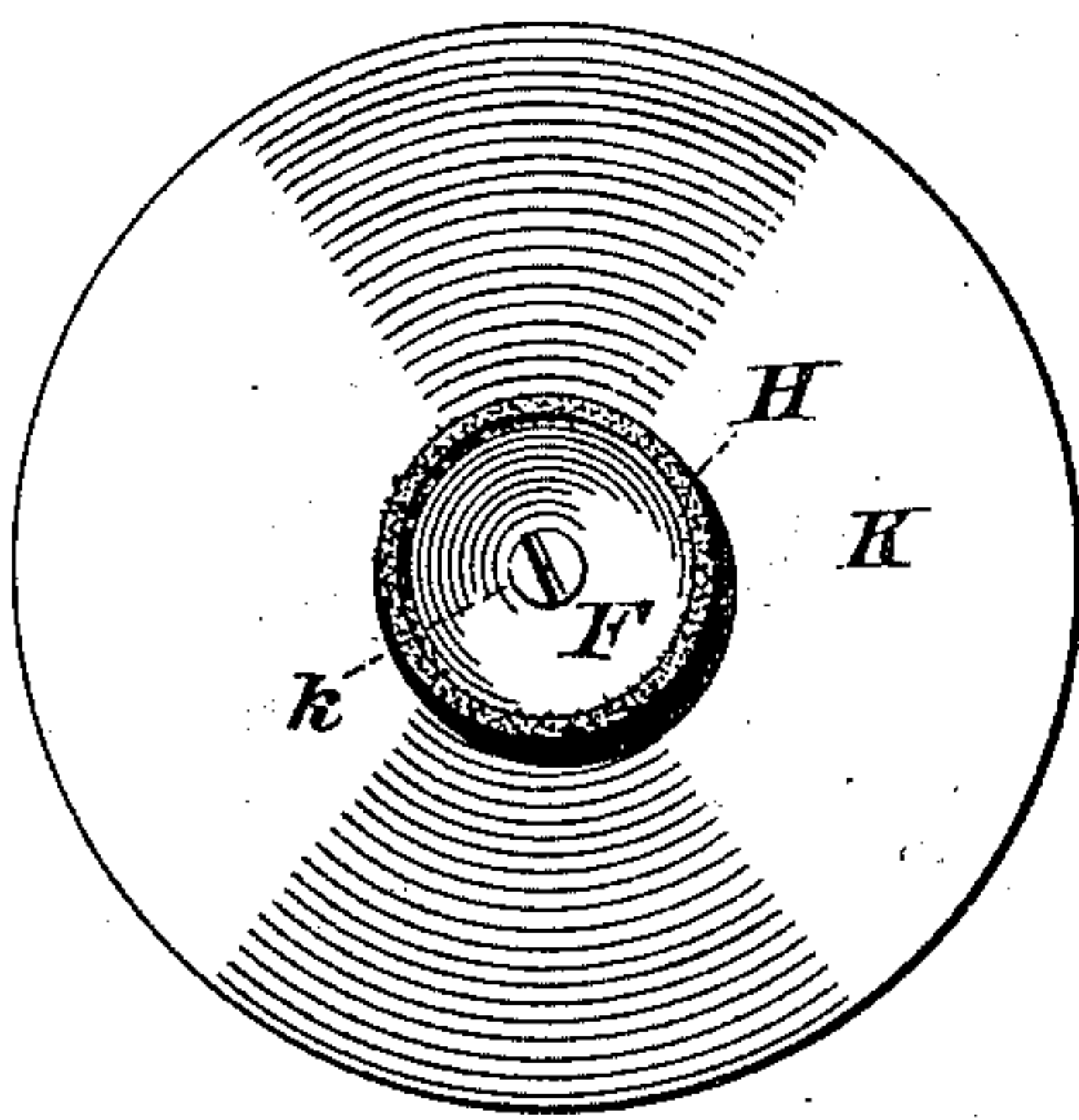
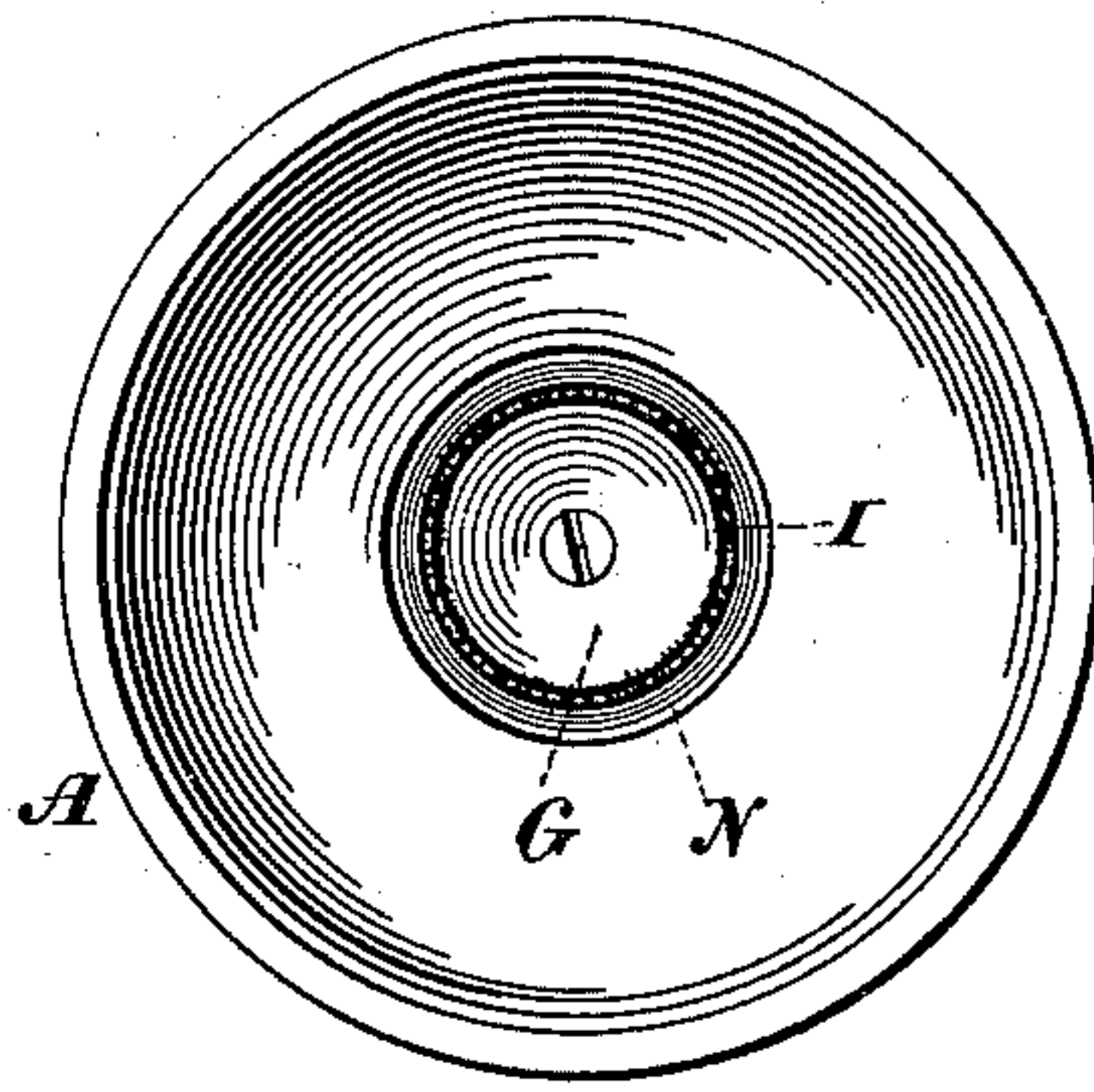


Fig. 3.



WITNESSES:

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MICROPHONE.

SPECIFICATION forming part of Letters Patent No. 561,358, dated June 2, 1896.

Application filed April 14, 1896. Serial No. 587,507. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. SUTTON, a resident of New Rochelle, Westchester county, State of New York, have invented certain new and useful Improvements in Microphones, of which the following is a specification.

My invention relates to microphones; and it consists in the construction hereinafter set forth and claimed.

The object of my invention is to produce a delicate, easily-adjusted, efficiently-operating microphone of the comminuted-electrode type, which is suitable for long or short distance telephoning.

My invention will be understood by referring to the accompanying drawings, in which—

Figure 1 is a longitudinal section through the center of a microphone embodying my invention. Fig. 2 is a rear view of a diaphragm; and Fig. 3 is a face view of the "back" of the telephone, the cap and diaphragm being removed.

Referring particularly to Fig. 1, the talking parts of the telephone are incased in the usual casing comprising a back A and a cap B, secured thereto and carrying a mouthpiece C. The back A is provided with the usual nipple D, to which a stem E is secured by a set-screw a. This stem constitutes the attaching means for securing the microphone to a support.

Referring now particularly to the variable-pressure parts of the microphone and calling attention particularly to Fig. 1, it will be observed that these parts comprise a pair of buttons F G, preferably of carbon, which are placed opposite to each other and surrounded by a sleeve or envelop of cloth H I, whose abutting edges *h i* are preferably frayed. The abutting edges serve to keep the buttons F G a little distance apart to form a chamber J, which contains pulverulent material, such as comminuted carbon. One of these buttons F is carried on the diaphragm K, being electrically connected thereto by the bolt or screw *l*, whose head is insulated from the button. The other electrode is preferably supported by the telephone-back, and is here shown as sustained by a metallic bolt L passing through the electrode and supported in an insulating-sleeve M, with an insulating-washer N interposed between the electrode and the telephone-back. The head of this bolt is insulated

from the button G. One of the terminals of the telephone is constituted by this bolt, which may be connected with a suitable wire O, the other terminal being constituted by the telephone-casing.

I am aware that it is not broadly new to inclose comminuted matter in an elastic envelop. I am also aware that these elastic envelops have heretofore been proposed to be made of various materials. For instance, in the patent to Stromberg and Carlson, No. 545,922, dated September 10, 1895, a plush ring carried by the diaphragm and bearing against a fixed electrode is shown. I am also aware that a ring of felt has been devised for the same purpose, as shown in the patent to Oeyan, No. 448,726, dated March 24, 1891, wherein a ring of felt is shown as carried upon a fixed electrode and bearing against a diaphragm. I do not therefore desire to be heard as claiming these structures; but

What I do claim, and desire to secure by Letters Patent, is—

1. A microphone comprising a diaphragm carrying an electrode, a back supporting an electrode, each of the said electrodes being surrounded by a fabric of a textile character, said electrodes being placed opposite one another with the edges of their surrounding envelops in contact, whereby a chamber is formed and comminuted material contained within the chamber.

2. A variable-pressure arrangement for electric telephones comprising a pair of oppositely-placed electrodes, a cloth envelop surrounding each electrode, the said cloth envelops abutting and presenting frayed edges to each other, combined with pulverulent material interposed between the electrodes, whereby free movement of the electrodes may be had relative to each other.

3. In a microphone, the combination of a button carried by the diaphragm and surrounded by a yielding fabric, another button supported by the back and also surrounded by a yielding fabric, the edges of the two fabrics abutting and forming a chamber, combined with pulverulent material contained in the space embraced by the fabric.

GEORGE W. SUTTON.

Witnesses:

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