(No Model.)

H. C. ALEXANDER.

TELEPHONE TRANSMITTER.

No. 569,908. Patented Oct. 20, 1896.

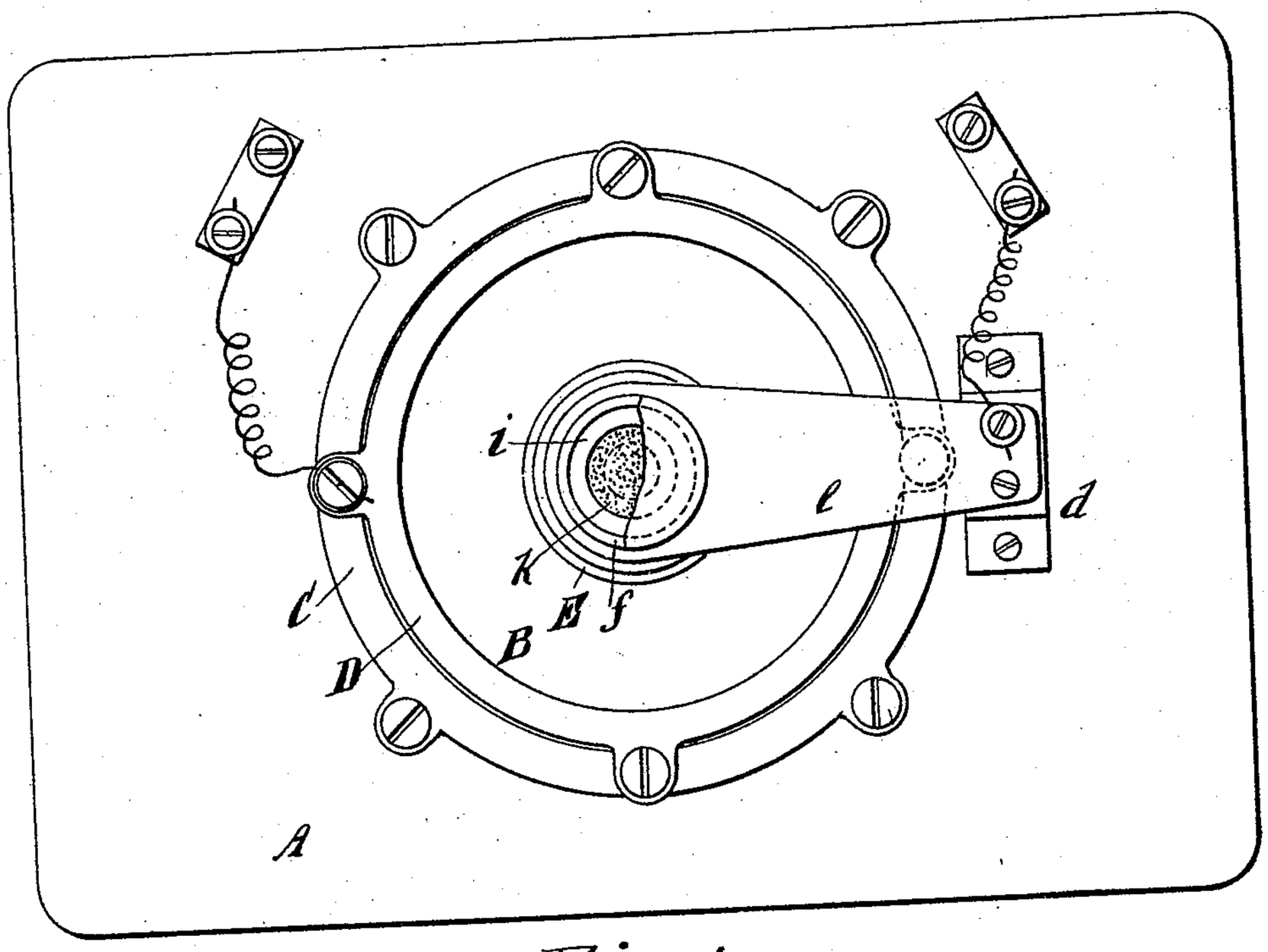

Fig. 1

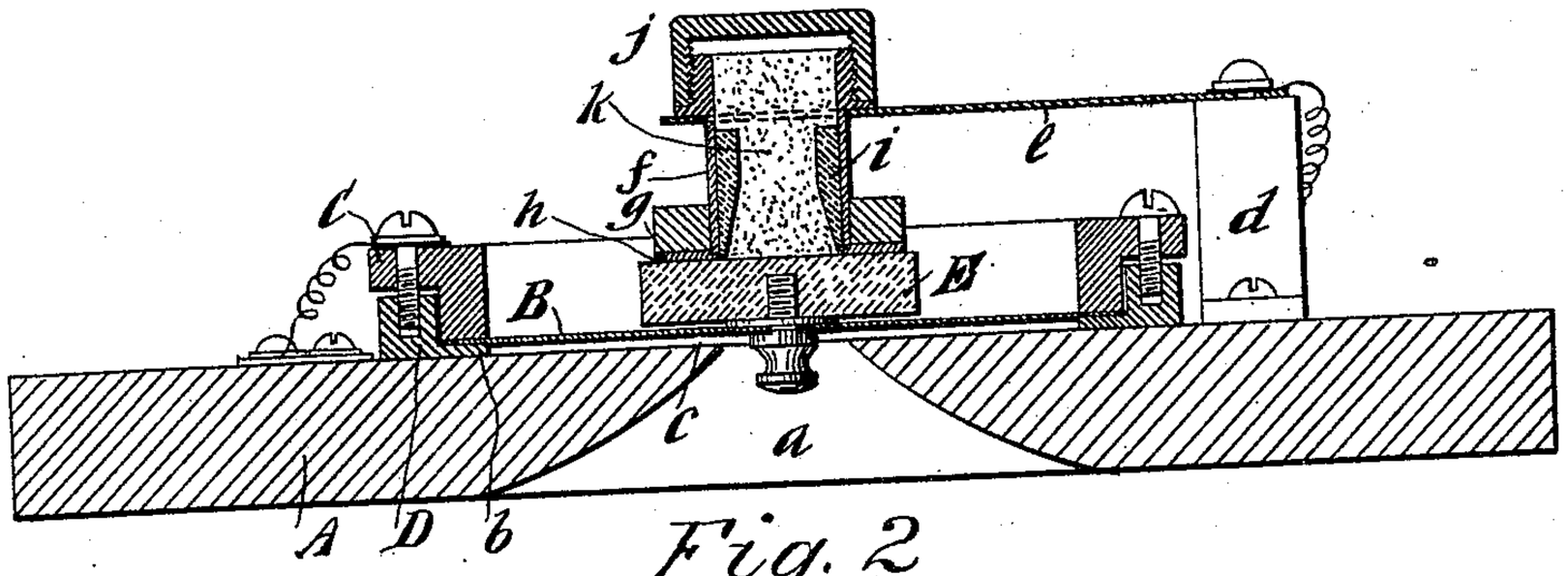

Fig. 2

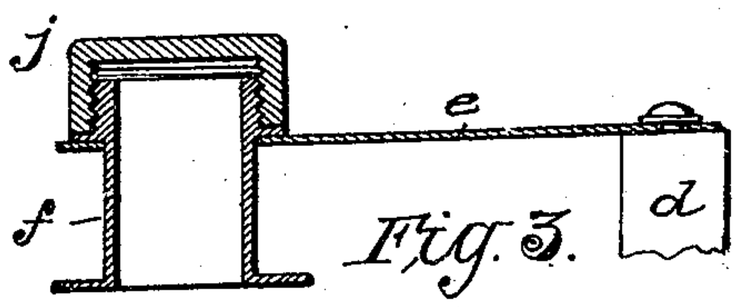

Fig. 3.

WITNESSES:

J. B. Walker

G. M. Hopkins.

INVENTOR

H. C. Alexander

BY

Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

HORACE C. ALEXANDER, OF BONHAM, TEXAS.

TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 569,908, dated October 20, 1896.

Application filed January 6, 1895. Serial No. 574,488. (No model.)

To all whom it may concern:

Be it known that I, HORACE C. ALEXANDER, of Bonham, in the county of Fannin and State of Texas, have invented a new and Improved Telephone-Transmitter, of which the following is a full, clear, and exact description.

The object of my invention is to provide a simple and effective telephone-transmitter in which the greatest volume of sound may be transmitted without causing rattling or grating.

My invention consists in the combination, with a diaphragm and carbon button carried thereby, of a spring-supported flaring conical carbon-cell provided with a flange covered with soft material and resting on the carbon button carried by the diaphragm, the carbon-cell being filled with granulated carbon resting in contact with the carbon button, all as will be hereinafter fully described.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a rear elevation of my improved transmitter, and Fig. 2 is a vertical transverse section. Fig. 3 is a detail view showing the spring and tube for carrying the carbon-cell.

In the door A of the transmitter-box (not shown) is formed a mouthpiece *a*, over the aperture of which at the back of the door is placed a diaphragm B. The said diaphragm B is clamped between the metal rings C D, the ring C being provided with an internal flange or fillet *b*, which receives the diaphragm and separates it from the door, thereby forming the resonant chamber *c*. The ring B is fastened to the back of the door A.

To the center of the diaphragm B is secured a carbon button E. To a standard *d*, secured to the door A, is attached a flat spring *e*, which extends over the diaphragm to a point opposite the carbon button E. In the free end of the spring *e* is inserted and secured in any preferred way, as, for example, by means of soldering, a metal tube *f*, provided with a flange *g*, having a facing *h*, of felt or analogous material, which rests upon the carbon button E. In the tube *f* is inserted a carbon-cell *i*, which extends from a point near the carbon button E to the spring *e* and is open from front to rear. The forward end, or the end adjoining the carbon button E, is flared or made conical. The back end of the tube *f* is closed by a screw-cap *j*, and in the carbon-cell *i* and the rear end of the tube *f* is placed a quantity of granulated carbon *k*, which practically fills the cell and is in contact with the carbon button E. The granulated carbon is prevented from escaping between the flange *g* and the carbon button E by the felt *h*.

Current is taken through the diaphragm, carbon button, through the granulated carbon and spring *e* and primary wire of an induction-coil. When sounds are uttered in the mouthpiece *a*, the vibration of the diaphragm causes a jarring of the granulated carbon in the carbon-cell, thus varying the electrical conductivity of the cell and producing the variations of current necessary for the transmission of speech.

It is obvious that the results would be the same if the flaring carbon-cell were attached to the diaphragm and the carbon button attached to the spring, or if the flaring carbon-cell attached to the spring pressed directly upon or against the diaphragm, leaving out the carbon button. Therefore I do not limit myself to the exact arrangement herein shown and described.

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

1. In a telephone-transmitter, the combination of a diaphragm, a spring-supported carbon-cell furnished with a flange faced with soft material, and a filling of granulated electrode placed in the carbon-cell, substantially as specified.

2. In a telephone-transmitter, the combination of a diaphragm provided with a carbon button, a spring-supported carbon-cell furnished with a flange faced with soft material, and a filling of granulated carbon placed in the carbon-cell, substantially as specified.

3. The combination with a vibratory carbon button, of a flaring spring-supported carbon-cell having a filling of granulated carbon, substantially as specified.

HORACE C. ALEXANDER.

Witnesses:

JAS. R. MCKINNEY,

A. B. SCARBOROUGH.