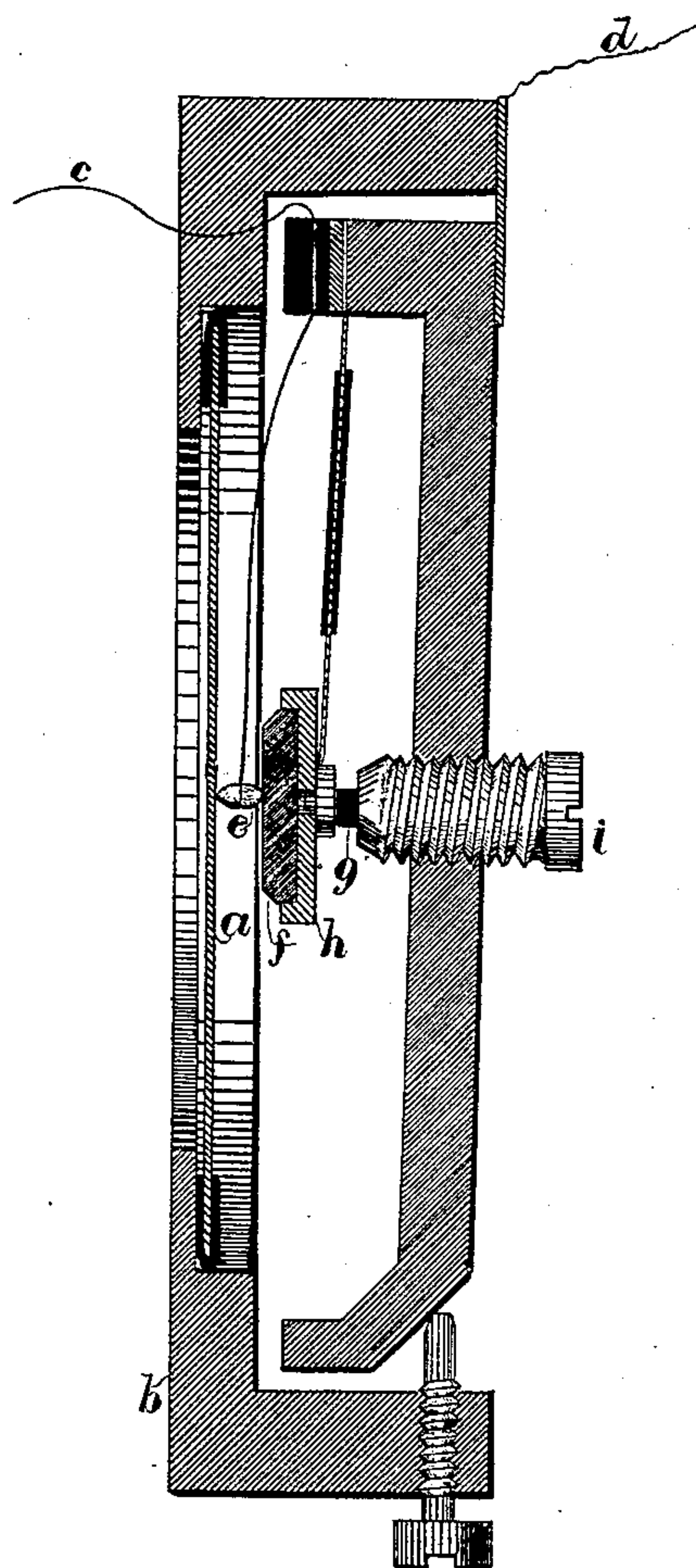


(No Model.)

C. E. SCRIBNER.
MICROPHONE.

No. 262,700.

Patented Aug. 15, 1882.



Witnesses

William S. Granger.
George M. Barton.

Inventor

Charles E. Scribner.

UNITED STATES PATENT OFFICE.

CHARLES E. SCRIBNER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WESTERN
ELECTRIC MANUFACTURING COMPANY, OF SAME PLACE.

MICROPHONE.

SPECIFICATION forming part of Letters Patent No. 262,700, dated August 15, 1882.

Application filed December 27, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. SCRIBNER, of Chicago, Illinois, have discovered a certain new and useful Improvement in Microphones, of which the following is a full, clear, concise, and exact description.

My invention relates to that class of telephone-transmitters in which the electrodes consist of a metallic point supported by a spring and a carbon piece at the free end of a loaded yielding support. The contact between the metallic point and the carbon piece may be termed a "loose contact," since the adjustment is such that the point presses lightly against the carbon piece.

In the Edison carbon transmitter the disks or buttons of carbon which form the electrodes are not in loose contact, but, on the contrary, are held firmly together by the pressure of the diaphragm. The vibrations of the diaphragm, however, cannot be increased by the loudest sounds to such an extent as to cause the electrodes to break contact. The microphone, however, having its electrodes in loose contact, is more especially adapted to the lighter sounds. Very loud sounds, however, directed against the diaphragm of the ordinary microphone cause the electrodes to separate and break contact, so that no intelligible sounds can be heard at the distant receiver. The capacity of the Edison transmitter is not limited by the loudness of the sounds directed against it. In fact, the louder the sound the better it works.

The microphone, as heretofore constructed, is limited in its transmitting capacity to sounds of moderate loudness—sounds not loud enough to break the contact of the electrodes.

My improvement consists in an adjustable

stop, preferably of soft rubber, placed on the side of the weighted support of the carbon opposite the metallic point, and so adjusted as not to interfere with the vibrations of the electrodes, yet so near as to keep the loaded carbon piece from moving far enough away to break contact with the metallic point.

In the drawing I have shown the ordinary microphone provided with my improvement.

The diaphragm *a* is placed upon the frame *b*, as heretofore. The battery-circuit of lines *c d* is closed through the electrodes *e f*, in the usual manner. Speaking against the diaphragm varies the resistance of the battery-circuit at the point of contact of the metallic point *e* and the carbon piece *f*. Loud sounds close to the diaphragm would drive the carbon piece so far back as to break the circuit. To prevent this I have placed the cushion or stop *g*, of soft rubber, just back of the loaded piece *h*, which supports the carbon electrode. The cushion *g* is supported and adjusted by the screw *i*. A hole is bored in the end of the screw to receive the soft-rubber cushion. The stop should be adjusted so as to touch or nearly touch the piece *h*.

I have used hard rubber with good results, instead of the soft rubber. I may omit the rubber piece *g* and use the screw *i* as the stop.

I claim—

The combination, in a microphone, of the electrodes suspended in loose contact with an adjustable stop, whereby the separation of the electrodes is prevented when loud sounds are directed against the diaphragm.

CHARLES E. SCRIBNER.

Witnesses:

GEORGE P. BARTON,
WILLIAM S. GRANGER.