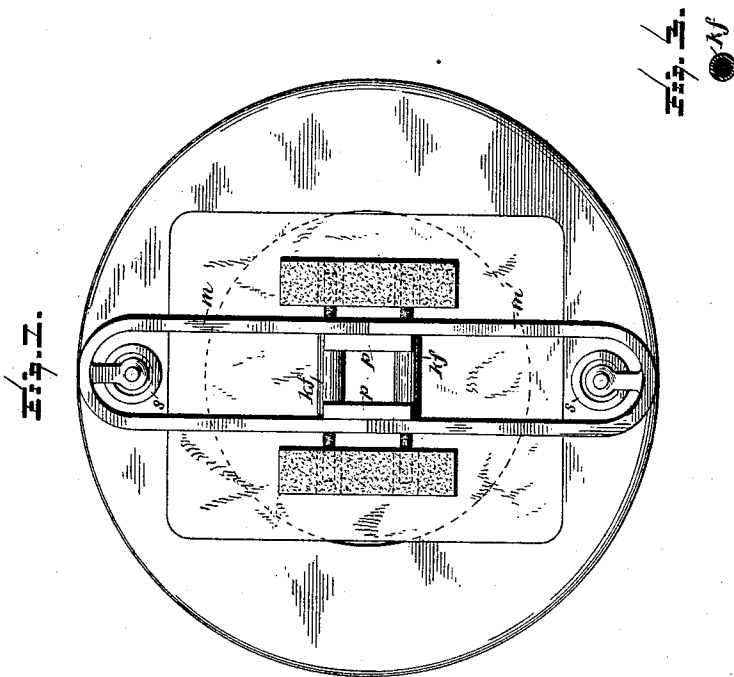
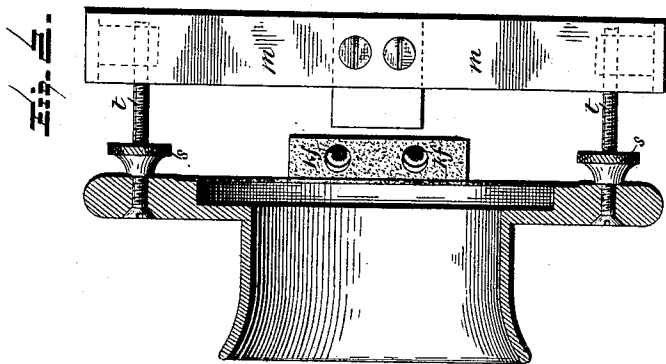


(No Model.)

C. VOGT.
MICROPHONE.

No. 476,582.

Patented June 7, 1892.



WITNESSES:

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CÆSAR VOGT, OF POSEN, GERMANY.

MICROPHONE.

SPECIFICATION forming part of Letters Patent No. 476,582, dated June 7, 1892.

Application filed May 27, 1891. Serial No. 394,319. (No model.)

To all whom it may concern:

Be it known that I, CÆSAR VOGT, a subject of the King of Prussia, German Emperor, residing at Posen, in the German Empire, have invented a Coal-Roller Microphone, of which the following is a specification.

This invention relates to microphones wherein means are provided to lift up the carbon contacts in their bearings, thereby preventing the disturbing noise which is produced in the ordinary microphones. Efforts have been made to lift up the carbon contacts or to reduce their weight in the carbon bearings in order to overcome the formation of coal-dust in the bearings, which seems to be the cause of strange noises in the microphone which nearly prevent the practical use of the same.

I have constructed a microphone wherein the contacts are maintained in operative relation by magnetic attraction; and to this end I provide the carbon cylinders with a sleeve of soft iron, nickel, or other magnetic material, and I place an adjustable magnet in more or less close proximity to the same, thus more or less attracting the carbon contacts out of their bearings.

In the accompanying drawings a microphone embodying my invention is shown.

Figure 1 a sectional view from behind. Fig. 2 is a side elevation partly in section; and Fig. 3 is a cross-section through one of the carbon cylinders, showing the surrounding magnetic sleeve.

The ordinary diaphragm, of wood, metal, or any of the known materials, supports the ordinary contact-blocks, insulated in the usual way when the diaphragm is not of wood or insulating material. Cylindrical bridging-contacts *kr*, lodged in the said blocks in holes or recesses, are provided with a magnetic lining consisting in a sleeve of iron, nickel, or other magnetic material. *mm'* are two horse-shoe magnets provided with screw-tapped lugs *xx*, wherein screw-bolts *tt* can be turned, which are inserted in the top of the casing. *ss* are nuts with roughened rims, by means of

which the screws *tt* can be set fast in screwing them against the inner side of the top of the casing. By turning the screws *tt* in the said top to the left or to the right the magnets *mm'* can be distanced or approached to the diaphragm. The poles of the magnets, being of course arranged so that the positive branches come together and that the negative branches touch each other, are provided with pole-shoes *pp*, one of which is consequently strongly positive and the other negative.

It is obvious from the description that the carbon cylinders in the working position of the microphone are not supported in their bearings with their full weight, but that by means of the magnetic attraction they are lifted more or less out of the lowest part of their bearings, according to the smaller or greater proximity of the poles *pp* of the magnets, as clearly shown by Fig. 2. Thus the carbon cylinders are lifted more or less in their bearings without being touched and not in any way impeding the most easy and free vibration of the diaphragm. The result is a clear reproduction of every sound, hard or soft, of the same character and shade, no matter if it be whispered or shouted into the apparatus.

Having described my invention, what I desire to secure by Letters Patent is—

In a microphone, the combination of the diaphragm having two recessed contact-blocks insulated from each other with carbon cylinders bridging these contacts, provided with magnetic sleeves, and a magnet or magnets in inductive proximity to the sleeve of magnetic material for maintaining the operative relation between the cylinders and contacts, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CÆSAR VOGT.

Witnesses:

ERNST BURG,
Secretary.

ERNST SCHMEDICKE.