F. A. KLEMM.

Telephone-Transmitter.

No. 227,270. Patented May 4, 1880.

FIG. 1.

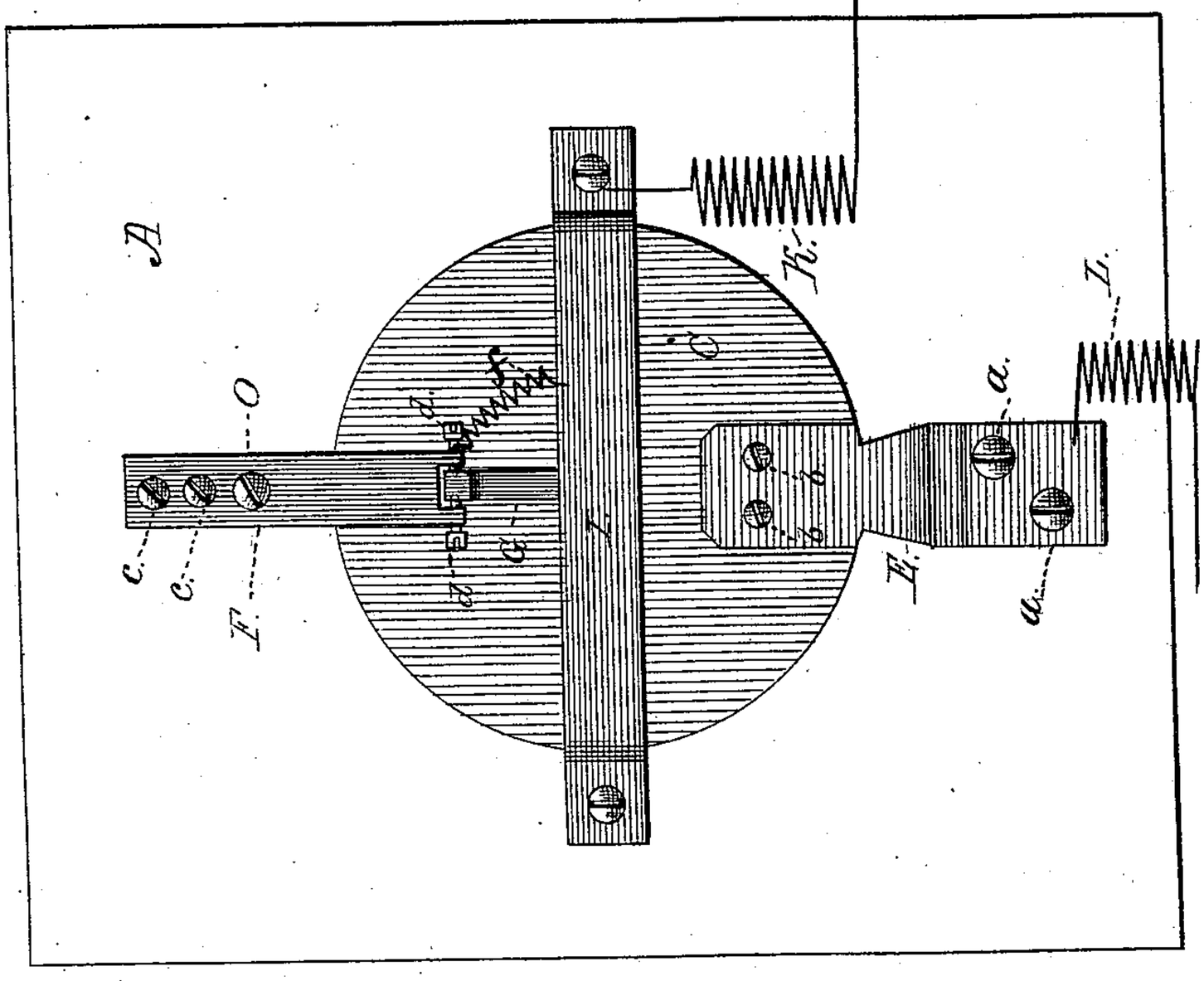
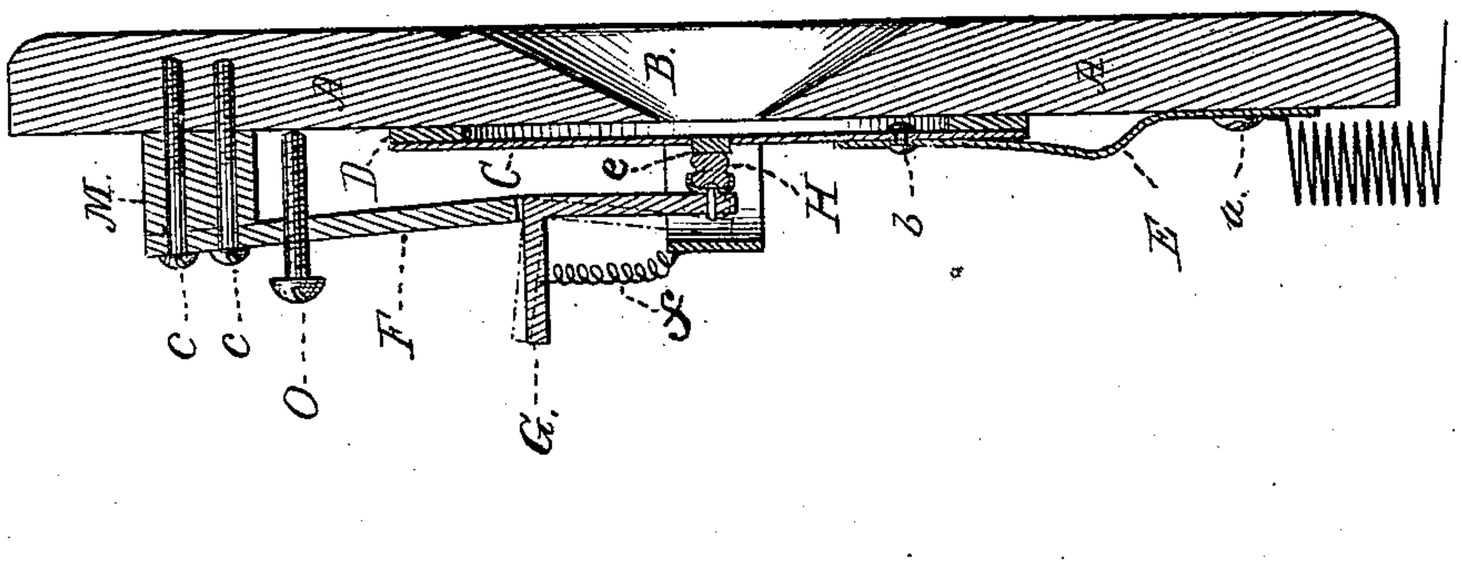


FIG. 2.



WITNESSES

John F. C. Prinkert

John Tyler

Frank A. Klemm. INVENTOR

By Wm. C. Linton ATTORNEY

UNITED STATES PATENT OFFICE.

FRANK A. KLEMM, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF, ERNEST MARX, OF SAME PLACE, SIMON WOLF, OF WASHINGTON, D. C., AND MORITZ LOTH, OF CINCINNATI, OHIO.

TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 227,270, dated May 4, 1880.

Application filed February 20, 1880.

To all whom it may concern:

Be it known that I, FRANK A. KLEMM, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Telephone-Transmitters; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

My invention relates to certain novel features of construction in telephone-transmitters. It is an improvement upon the construction shown and described in an application for Letters Patent filed by me on the 17th day of November, 1879.

In this application referred to I have shown and described the carbon point secured to a holder attached to the end of a spring-arm which forms one electrode, and which is adjustable by means of a screw to regulate the mechanical contact of the carbon point with the platinum point in the center of the diaphragm.

My present invention has for its object to dispense in a measure with the spring properties of the arm to which the carbon-holder is attached and to avoid the frequent adjustments rendered necessary by inherent properties of a spring; and with these ends in view my invention consists in securing the carbon point and holder to the end of a practically rigid and adjustable arm, in the manner hereinafter described, to secure mechanical contact between the carbon point and the diaphragm by gravity, so that the variations of temperatures, &c., will not affect the same.

In order that those skilled in the art may understand my invention, I will proceed to describe its construction and operation, referring by letters to the accompanying drawings, in which—

Figure 1 is a plan view of the inside of the front of a transmitter-box with my invention applied thereto, and Fig. 2 is a central longitudinal section of the same.

Similar letters indicate like parts in both figures.

A is the front of an ordinary transmitter-box, and B the beveled opening or mouth-piece leading to the diaphragm. C is the diaphragm, which is held in contact with a felt or other suitable damping ring or shoulder, D, by means of a metallic spring-arm, E, which is secured at one end by screws *a a* to the front piece, A, and by screws *b b* at the other end to the diaphragm, so that the arm E is practically a spring-hinge. On the opposite side to this spring-hinge is secured to the piece A a practically rigid metallic arm, F, which is fastened in place by screws *c c*. The free end of this arm is bifurcated or mortised, and pivoted therein by adjustable screw-pivots *d d* is a knee or metal angle-piece, G, to the lower extremity of the vertical leg of which is secured in any suitable manner a carbon button, H, which is kept in contact with the platinum point *e* in the center of the diaphragm by the gravity of the horizontal leg of the knee.

I is a metal bridge, secured to the piece A at right angles, preferably, to the arm F, and this bridge and the knee G are electrically connected by a conducting-wire, *f*, the other necessary connections being made by wires K L from the one end of the bridge I and the end of the spring-hinge E.

The arm F is secured to the piece A by a post or block, M, and screws *c c*, and with its lower end inclined toward the diaphragm.

O is a screw, which has a thread bearing in the arm F, and its end in contact with the piece A or a bearing-block secured thereto, so that the inclination of said arm may be slightly adjusted or varied by said adjusting-screw.

The necessary connections with the induction-coil, telephone-posts, and main line are made in the usual manner well known to those skilled.

From the foregoing description it will be readily understood that the carbon point is kept in mechanical contact with the platinum point in the diaphragm entirely by the gravity of the knee G, which may be adjusted by the

screw O, and that there is no possibility of the parts getting out of adjustment.

I do not wish to confine myself to the exact angular form of the knee G, as it is apparent that any other form which will locate a weight beyond the pivot to form a leverage will accomplish the same result.

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

1. In combination with the vibrating carbon-holder G and arm F, the bridge I and connecting-wire *f*, substantially as and for the purpose set forth.

2. The arm F, inclined toward the diaphragm and provided with an adjusting-screw, O, substantially as and for the purpose set forth.

3. The combination, with the mouth-piece of a telephone-transmitter, of the diaphragm C, secured by spring-hinge E, the arm F, knee G, and carbon button H, substantially as and for the purpose set forth.

Witness my hand this 14th day of February, A. D. 1880.

FRANK A. KLEMM.

In presence of—
MAREUS MARX,
S. VAN ZANDT.