

(No Model.)

G. D. CLARKE.

CARBON TELEPHONE TRANSMITTER.

No. 253,977.

Patented Feb. 21, 1882.

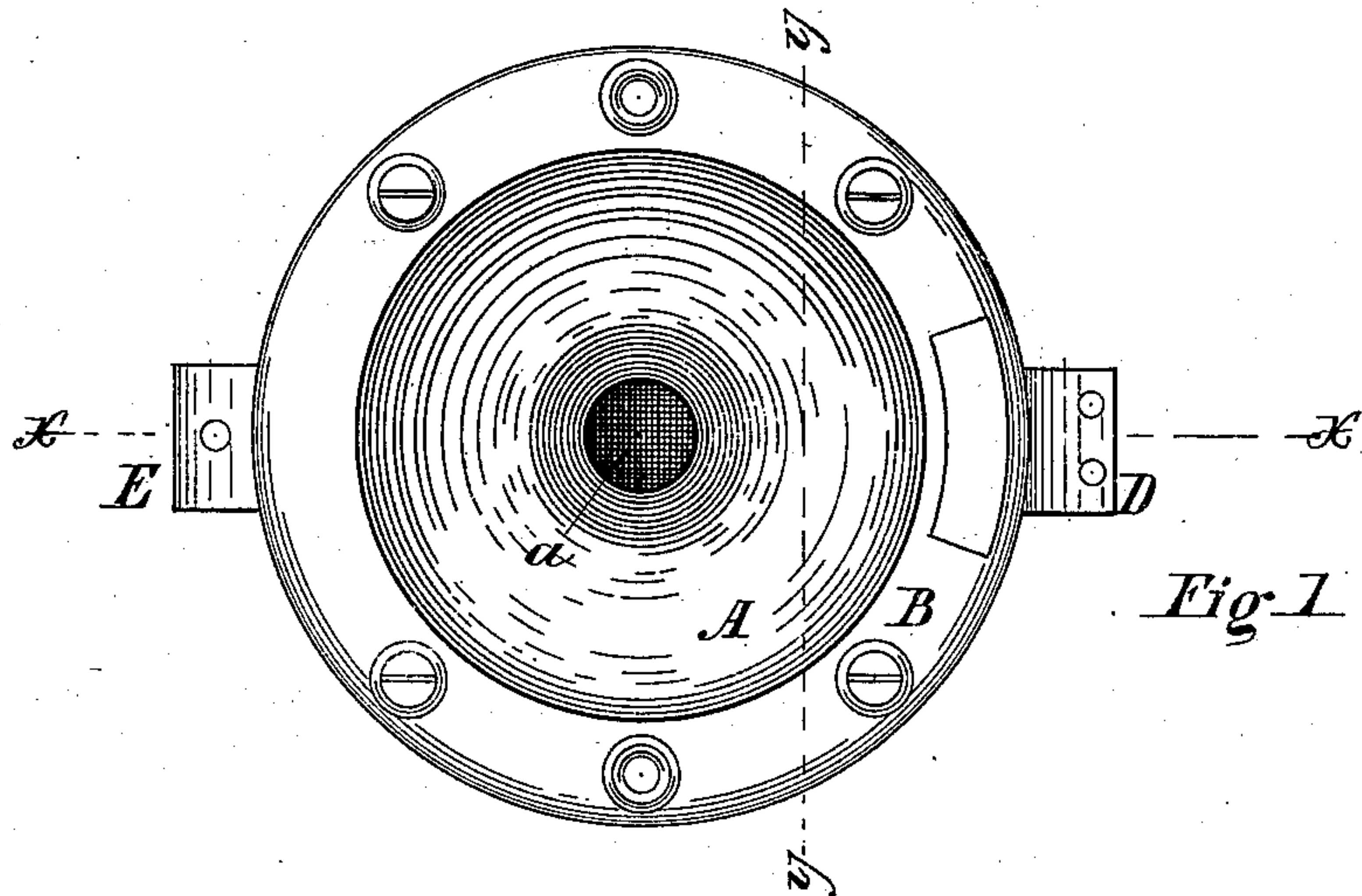


Fig. 1

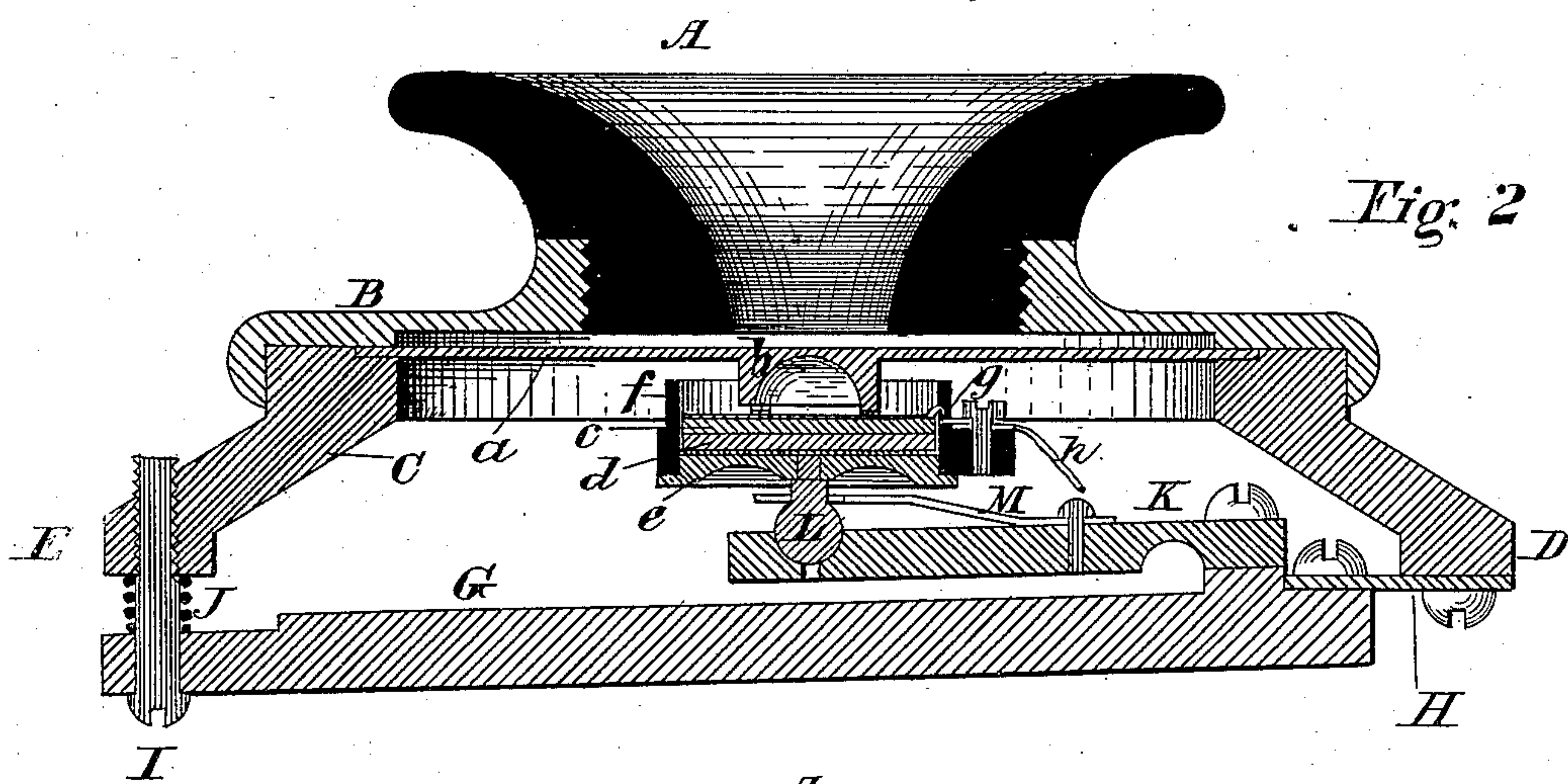


Fig. 2

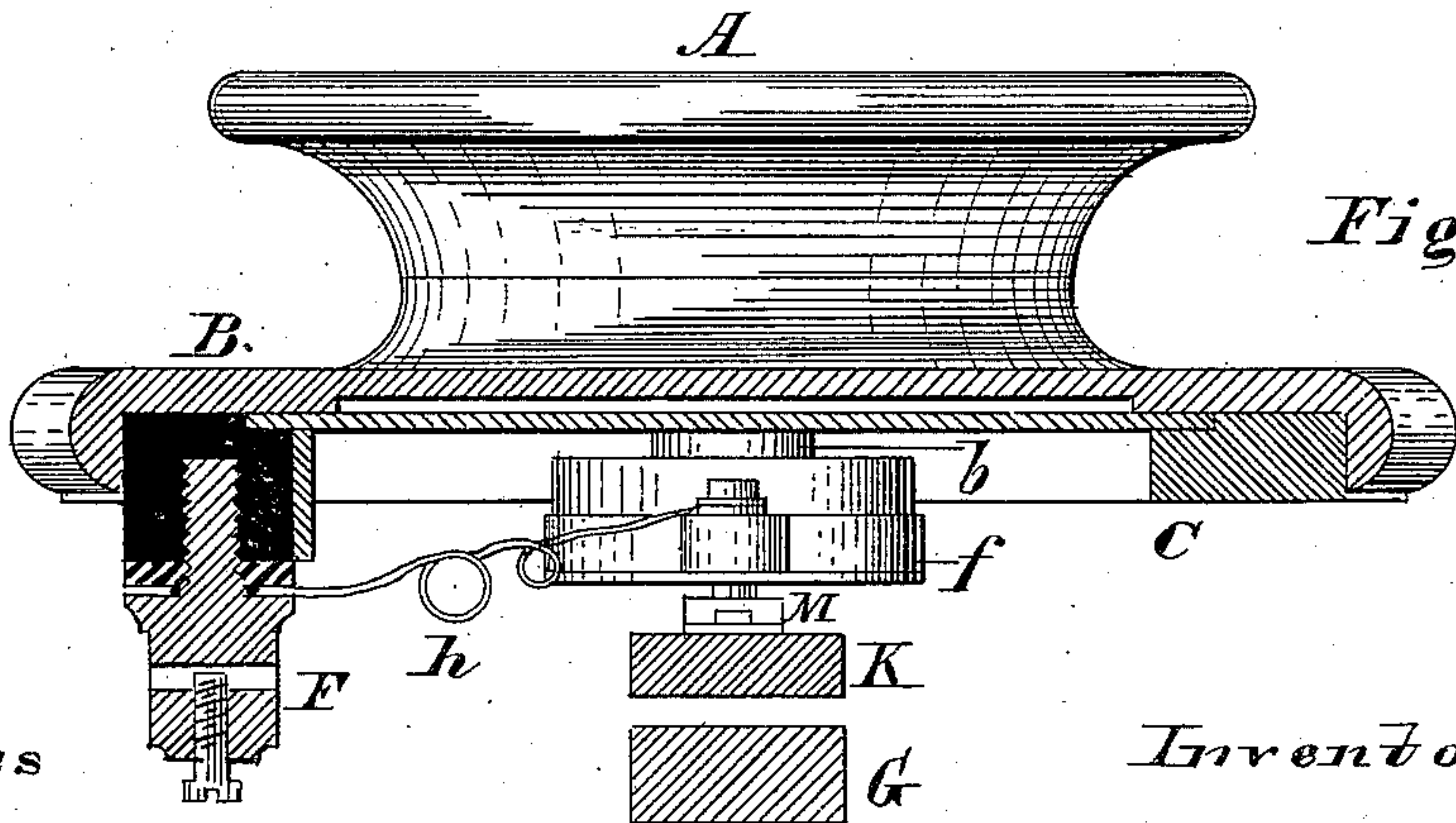


Fig. 3

Witnesses

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GEORGE D. CLARKE, OF CHICAGO, ILLINOIS.

CARBON TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 253,977, dated February 21, 1882.

Application filed October 18, 1880. (No model.) Patented in England November 29, 1879.

To all whom it may concern:

Be it known that I, GEORGE D. CLARKE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Carbon Telephone-Transmitters, of which the following, reference being had to the accompanying drawings, is a specification.

My invention is limited to the combination set forth in the claim, the broad or general features herein shown being the subject-matter of another of my pending applications.

In the Blake transmitter an attenuated point or needle is supported by a spring against the carbon point. The electrodes are thus made self-adjusting. By the use of my invention a somewhat analogous result is obtained in telephones having carbon buttons, which heretofore have been supported rigidly as the electrodes.

In the drawings, Figure 1 represents a plan view of a carbon telephone-transmitter embodying my invention; Figs. 2 and 3, sectional views thereof, respectively, upon dotted lines *xx* and *yy*.

In the several figures like letters of reference indicate similar parts.

The mouth-piece A and upper portion, B, of the frame are of the usual form. The under portion, C, of the frame is provided with lugs or projections D and E, and the usual binding-post, F. The cast-iron adjusting-bar G is secured and adjusted to the lugs by means of sheet-metal spring H, screw I, and coil-spring J. In the socket provided therefor in steel bar K the ball L is confined, as shown by metal spring-clamp M. The diaphragm *a* is provided with my tripod ring *b*, which is more fully described and shown in patent No. 217,773, granted me as assignor July 22, 1879.

The metal plate *c* and carbon *d* may be placed

in the usual manner with the lower surface of the carbon resting upon the platinum surface of the brass bed-piece *e*. The hard-rubber cup *f* is of the usual form.

The battery-current passes from any part of the frame to the brass bed-piece, and thence through the carbon button and by platinum ribbon *g* and wire *h* to the binding-post, which is insulated from the frame in the usual manner by hard-rubber bushing.

As the plane of the diaphragm is vibrating and constantly changing, in order to maintain an even bearing upon the carbon the support of the carbon must adapt itself to the changes in the plane of the diaphragm. This is accomplished by means of the ball L resting in its socket, as shown.

The steel bar should be of such thickness near the end which is bolted to the adjusting-bar that it may respond to the vibrations of the diaphragm communicated to it through the medium of the ball L, bed-plate *e*, and carbon *d*.

The cast-iron bar G, when once adjusted by means of screw I, remains as placed, its principal office being to support the steel bar K.

There is a fundamental tone and sound which, acting upon the diaphragm of a given telephone, is best transmitted. By supporting the carbon button as above described, sounds above and sounds below this fundamental may be successfully transmitted.

I claim—

An elastic support for the carbon button, which consists in the combination of the bed-piece with ball L, spring-clamp M, yielding bar K, and means for adjusting said bar, substantially as shown and described.

GEORGE D. CLARKE.

Witnesses:

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