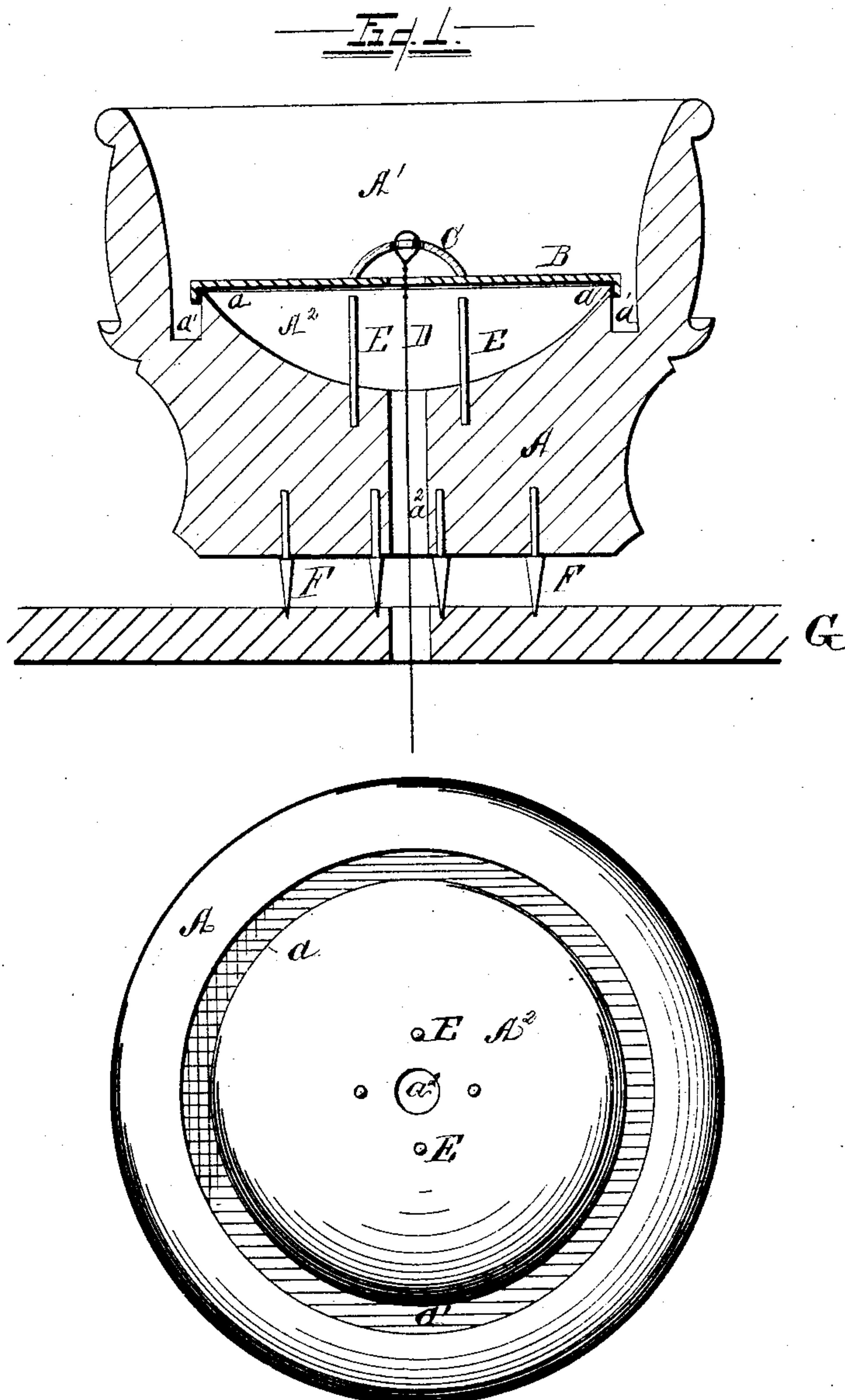


(No Model.)

I. F. TUCKER.  
MECHANICAL TELEPHONE.

No. 308,582.

Patented Nov. 25, 1884.



WITNESSES

*Samuel C. Thomas*  
*N. S. Wright*

Fig. 2.

INVENTOR

*I. F. Tucker*  
*W. W. Leggett*  
Attorney

# UNITED STATES PATENT OFFICE.

IRETT F. TUCKER, OF SUMNER, MICHIGAN, ASSIGNOR OF ONE-HALF TO  
MORRIS W. TUCKER, OF SAME PLACE.

## MECHANICAL TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 308,582, dated November 25, 1884.

Application filed April 16, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, IRETT F. TUCKER, of Sumner, county of Gratiot, State of Michigan, have invented a new and useful Improvement in Mechanical Telephones; and I do hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists in the combination of devices and appliances, hereinafter specified, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a section of a device embodying my invention. Fig. 2 is a plan view of the same with the diaphragm removed.

My invention relates to mechanical telephones, and has for its object an improved transmitter and receiver which shall be especially sensitive and respond more satisfactorily in the conveyance of messages over the transmitting-wire.

It consists, essentially, of a metallic diaphragm supported at or near its periphery upon an edge of the bowl, said bowl constructed with a cup-shaped sounding-chamber back of the diaphragm and a cup-shaped projection in front of the diaphragm.

I carry out my invention as follows:

In the drawings, A represents the bowl, constructed of any suitable material, said bowl provided with the outer cup-shaped orifice, A', in front of the diaphragm, and a cup-shaped sounding-chamber, A<sup>2</sup>, back of the diaphragm. The periphery of the sounding-chamber A<sup>2</sup> terminates in a sharp edge, *a*, the orifice A' being cut down sufficiently upon its exterior to form said edge and a depression shown at *a'*. I prefer to make the sounding-chamber A<sup>2</sup> of circular form.

B is the diaphragm, made of any suitable material, preferably of copper. This diaphragm rests upon edge *a* of the bowl, its periphery being flanged as shown, the flange entering into the depression *a'* of the orifice A'.

C is a button, preferably made of copper, concaved on its under surface.

D is the transmitting-wire, connected with said button and passing through the diaphragm and the channel *a*<sup>2</sup> of the bowl to the opposite transmitter.

E represents sounding-posts secured in the bowl beneath or back of the diaphragm.

F represents studs adapted to hold the transmitter away from the wall or casing G on which the instrument rests, so that there will be no deadening of the sound, and permitting the bowl to be secured at any desired angle to the wall or casing.

I do not confine myself to any specific shape of the chambers A' and A<sup>2</sup>, nor do I limit myself to the construction of the bowl with the chamber A' in connection with the other features of the apparatus, as they may be used without said orifice, although by constructing the bowl therewith the sound in receiving is projected more satisfactorily into the room, and it aids also in receiving the message. By locating the diaphragm upon the sharp edge *a* the sound is made clearer and of better tone, while the flange stiffens the metal and causes it to remain more steadily in position.

What I claim is—

1. A mechanical telephone transmitter and receiver constructed with the sounding-chambers A<sup>2</sup> back of the diaphragm, said chamber terminating with an edge, and in combination therewith a diaphragm resting upon said edge, substantially as described.

2. A mechanical telephone transmitter and receiver constructed with the sounding-chambers A<sup>2</sup> terminating with a sharpened edge, and in combination therewith a diaphragm resting upon said edge, a transmitting-wire connected with said diaphragm and passed through an orifice, *a*<sup>2</sup>, of the bowl, substantially as described.

3. A mechanical telephone transmitter and receiver constructed with a sounding-chamber, A<sup>2</sup>, back of the diaphragm, and provided with an outer edge, *a*, a diaphragm resting upon said edge, and a chamber, A', in front of said diaphragm, substantially as described.

4. A mechanical telephone transmitter and receiver constructed with a bowl, A, having a sounding-chamber, A<sup>2</sup>, an orifice, *a*<sup>2</sup>, therein and terminating with an edge, with diaphragm



resting upon said edge, said chamber provided with sounding-posts located back of the diaphragm, substantially as described.

5 5. A mechanical telephone transmitter and receiver constructed with a sounding-chamber,  $A^2$ , an orifice,  $a^2$ , said chamber constructed with an edge, a diaphragm resting upon said edge, a transmitting-wire secured to said diaphragm, and in connection therewith the studs  
10  $F$ , substantially as described.

6. A mechanical telephone transmitter and receiver constructed with the sounding-chamber  $A^2$  terminating in an edge, and in connection therewith a diaphragm of copper resting upon said edge and provided with a transmitting-wire, substantially as described.  
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7. A mechanical telephone transmitter and receiver constructed with a sounding-chamber, said chamber terminating with an edge, and in combination therewith a diaphragm 20 resting upon said edge, said diaphragm provided with a flange extending over said edge, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

IRETT F. TUCKER.

Witnesses:

SAMUEL BIGELOW,  
MORRIS W. TUCKER.