

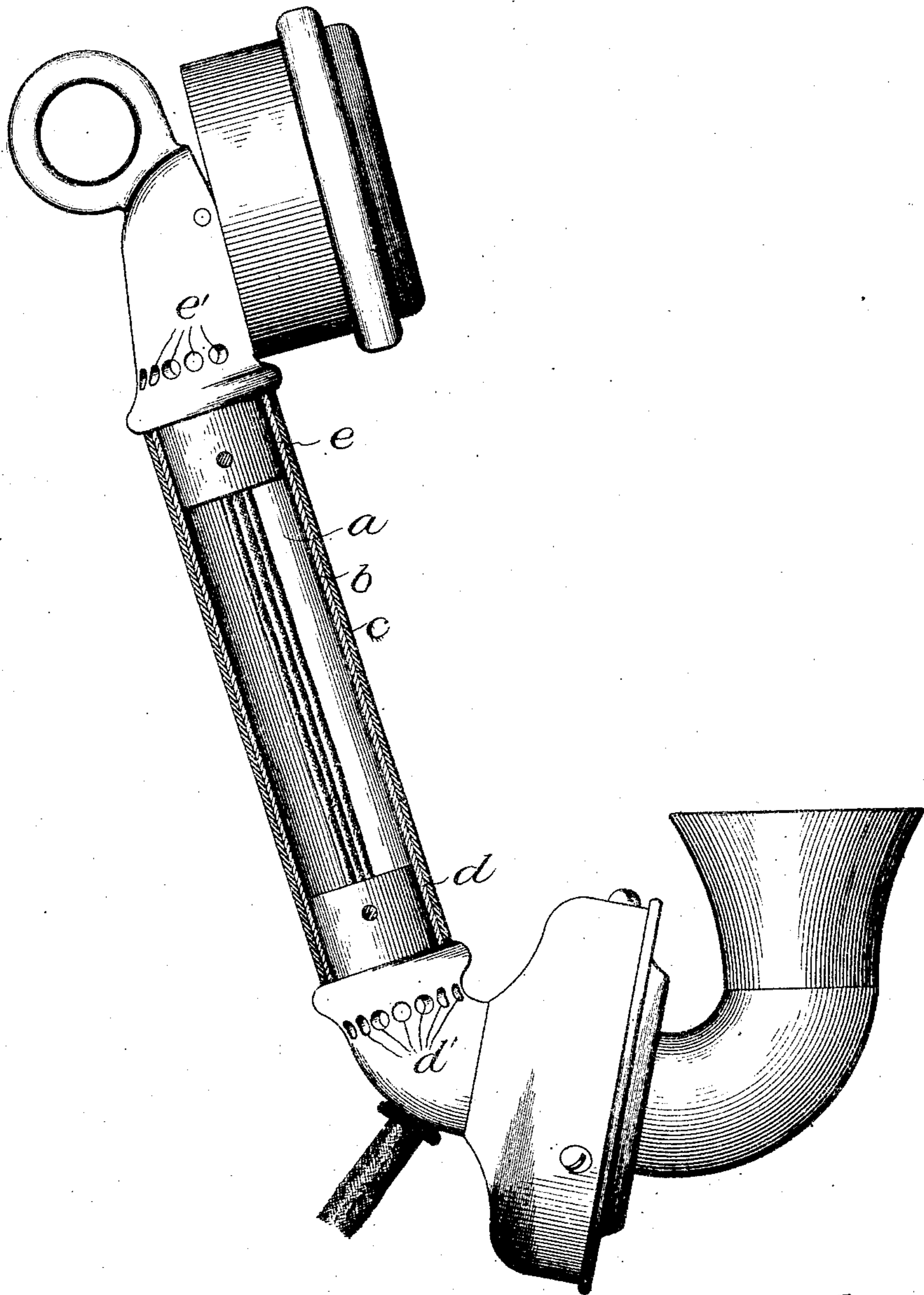
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C. C. GILCHREST.

COMBINATION TELEPHONE TRANSMITTER AND RECEIVER.

APPLICATION FILED OCT. 12, 1905.



Witnesses:

Ed. C. Davidson.
Irving Mac Donald

Inventor:
Charles C. Gilchrest,
By Barton Tanner
Attys

UNITED STATES PATENT OFFICE.

CHARLES C. GILCHREST, OF NEW YORK, N. Y., ASSIGNOR TO WESTERN ELECTRIC COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

COMBINATION TELEPHONE TRANSMITTER AND RECEIVER.

No. 830,583.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed October 12, 1905. Serial No. 282,382.

To all whom it may concern:

Be it known that I, CHARLES C. GILCHREST, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in a Combination Telephone Transmitter and Receiver, of which the following is a full, clear, concise, and exact description.

10 The object of my invention is to overcome the phenomenon known as "howling" in a combination telephone transmitter and receiver. Howling, or the tandem action between the transmitter and receiver, is due to a
15 variety of causes, the chief of which is the molecular transmission of the vibrations from the receiver to the transmitter, and vice versa, the metal parts of the set and the air column in the handle forming the mediums
20 or vehicles for the transmission of such vibrations. This trouble is especially pronounced in case the transmitter is abnormally microphonic or sensitive to vibrations other than those caused by the voice-currents
25 directed against the transmitter.

30 The object of my invention is to provide a construction whereby the column of air will be vented or left unconfined and whereby the metal connection between the two instruments will be so formed and reduced in cross-section at certain parts as to interrupt the molecular transmission of such sound-vibrations.

35 My invention will be more readily understood by reference to the accompanying drawing, in which I have shown a combination telephone transmitter and receiver embodying my invention.

40 The handle *a* consists of a brass tube *b*, with a covering of hard rubber *c*. The casting *d* of the transmitter and the casting *e* of the receiver are inserted, as shown, a short distance in the opposite ends of said tube and may be held in place by screws from opposite sides.
45 My invention consists in providing the holes

or perforations *d' d'*, &c., and *e' e'*, &c., in these castings. These perforations serve the double purpose of giving vent to the column of air in the tube and of reducing in cross-section the metal connection or medium between the two instruments.

I have made the column of air free and unconfined by providing holes or perforations in the side of the handle. All things considered, I have found it best to provide the circular
55 rows of perforations or openings *d' d'*, &c., and *e' e'*, &c., in the castings as shown, in this way practically eliminating the molecular transmission of the vibrations between the instruments and at the same time providing a sufficiently strong handle. The perforations in the castings are not liable to be covered up by the hand of the user, as would
60 be the case if located in the handle.

Having thus described my invention, I
65 claim as new, and desire to secure by Letters Patent, the following:

1. In a combination telephone transmitter and receiver, the combination with the castings supporting respectively the transmitter
70 and receiver, of a tube forming the handle connecting the same, said castings being each provided with perforations; whereby undue molecular transmission of the vibrations from the receiver to the transmitter and vice
75 versa is prevented, substantially as and for the purpose specified.

2. A hand telephone set comprising a transmitter and receiver with their hollow supports, and a hollow tube in the opposite
80 ends whereof said supports are inserted, said supports having air-vents for the column of air therein, to prevent howling between the transmitter and receiver.

In witness whereof I hereunto subscribe
85 my name this 31st day of July, A. D. 1905.

CHAS. C. GILCHREST.

Witnesses:

GEORGE A. HAMILTON,
FRANCIS L. GILMAN.