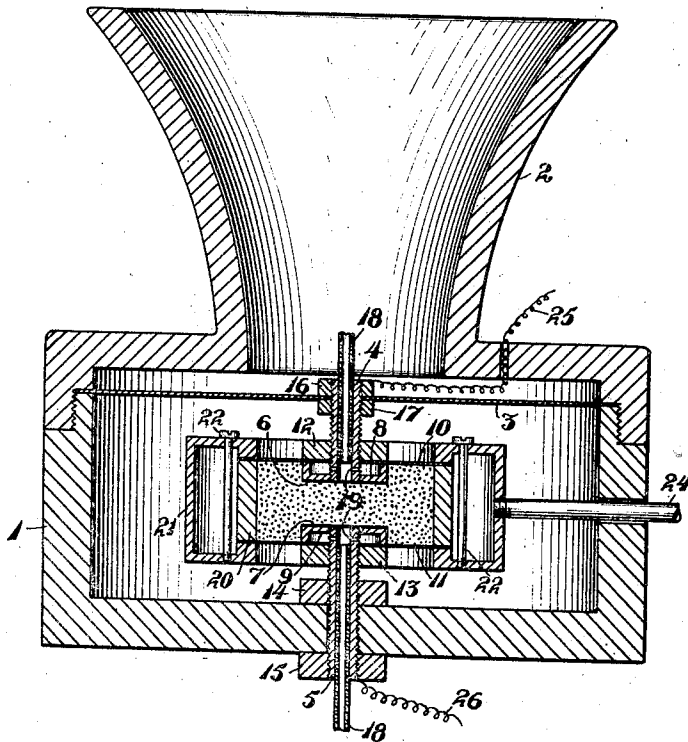


A. A. JAHNKE.
WIRELESS TELEPHONE TRANSMITTER
APPLICATION FILED SEPT. 21, 1908.

948,609.

Patented Feb. 8, 1910.



WITNESSES

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UNITED STATES PATENT OFFICE.

ALBERT A. JAHNKE, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO
SUSAN C. TATE, OF SAN FRANCISCO, CALIFORNIA.

WIRELESS-TELEPHONE TRANSMITTER.

948,609.

Specification of Letters Patent.

Patented Feb. 8, 1910.

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To all whom it may concern:

Be it known that I, ALBERT A. JAHNKE, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Wireless-Telephone Transmitters, of which the following is a specification.

The object of the present invention is to provide an improved telephone transmitter, especially adapted for wireless telephones, which will be more effective and powerful in its action than those heretofore employed.

In the accompanying drawing, the figure 1 is a vertical section of the apparatus.

Referring to the drawing, 1 indicates a casing of a telephone transmitter, and 2 the mouth piece thereof, screwed to the casing, and between which and the casing is clamped the main diaphragm 3, which is of metal, and of the usual construction.

4, 5 indicate metal tubes, which at their inner ends are secured to thin, oppositely arranged, radio-platinum disks or electrodes 6, 7. Upon or around said tubes, and behind said platinum disks, are metallic cup-shaped terminals 8, 9, and upon said tubes, behind said terminals, are circular sheets 10, 11, of mica. Nuts 12, 13 are then screwed upon said tubes behind said mica sheets to hold them in place against the cup shaped terminals. The outer ends of the tubes are now centrally screwed, one through the diaphragm and the other through the back of the casing, nuts 14, 15, 16, 17, being provided to secure them in place. Into said tubes are inserted tubes 18, of glass or other suitable material, the tubes 4, 5, being formed with apertures 19 at their inner ends, and alcohol or other volatile hydrocarbon fluid is supplied through said glass tubes and runs out through said apertures 19 into the cup-shaped terminals. The function of the alcohol in these terminals is to maintain the electrodes at a uniform temperature and prevent overheating of the same, by the cooling effect of the evaporation which takes place when the electrodes become heated owing to the passage of the current.

20 indicates a cylindrical wall formed of lava or mineral talc, which, with the two sheets of mica, forms a box. The edges of the mica sheets are clamped upon the cylindrical wall 20 by means of a hollow annular clamp 21, the inner side of which is open and receives the edges of the mica sheets and the

lava wall, and is clamped thereon by means of screws 22. Said clamp thus forms a reservoir, into which alcohol can be supplied by means of a supply tube 24. The box is filled with granules which may be, as usual, of carbon. But I prefer to use carborundum since it withstands heating effect of a large current. The current supply wires 25, 26 are connected as shown to the respective electrodes.

The following is the operation of the transmitter: The annular reservoir and the hollow electrode terminals having been filled with alcohol, the alcohol permeates through the lava and passes into the box containing the carbon or carborundum granules. When sound waves impinge upon the main diaphragm and on that account the two electrodes approach each other, and consequently the resistance of the carbon is diminished, the effect is to heat the electrodes. This results in an increased vaporization of the alcohol, which increases the conductivity of the carbon or carborundum granules, so that the current in the transmitter circuit is correspondingly increased. Obviously the reverse takes place when the electrodes recede from each other.

I claim:—

1. A telephone transmitter having a chamber containing granular material, and having a porous wall, and means for supplying a volatile liquid through said wall to said chamber, substantially as described.

2. A telephone transmitter having a chamber, end walls of which are formed by vibrating diaphragms, and having an annular porous wall, granular material in said chamber, and a chamber surrounding said porous wall and adapted to contain a volatile liquid, substantially as described.

3. A telephone transmitter comprising oppositely disposed mica sheets, cup-shaped terminals carried by said sheets, means for supplying said terminals with a volatile liquid, granular material between said sheets, electrodes carried by said sheets, and means for moistening the granular material with the volatile liquid, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ALBERT A. JAHNKE.

Witnesses:

F. M. WRIGHT,
D. B. RICHARDS.