B. F. GARDNER.

TELEPHONE DISINFECTOR.

APPLICATION FILED AUG. 29, 1910.

975,346. **Patented Nov. 8, 1910.**

Fig. 1

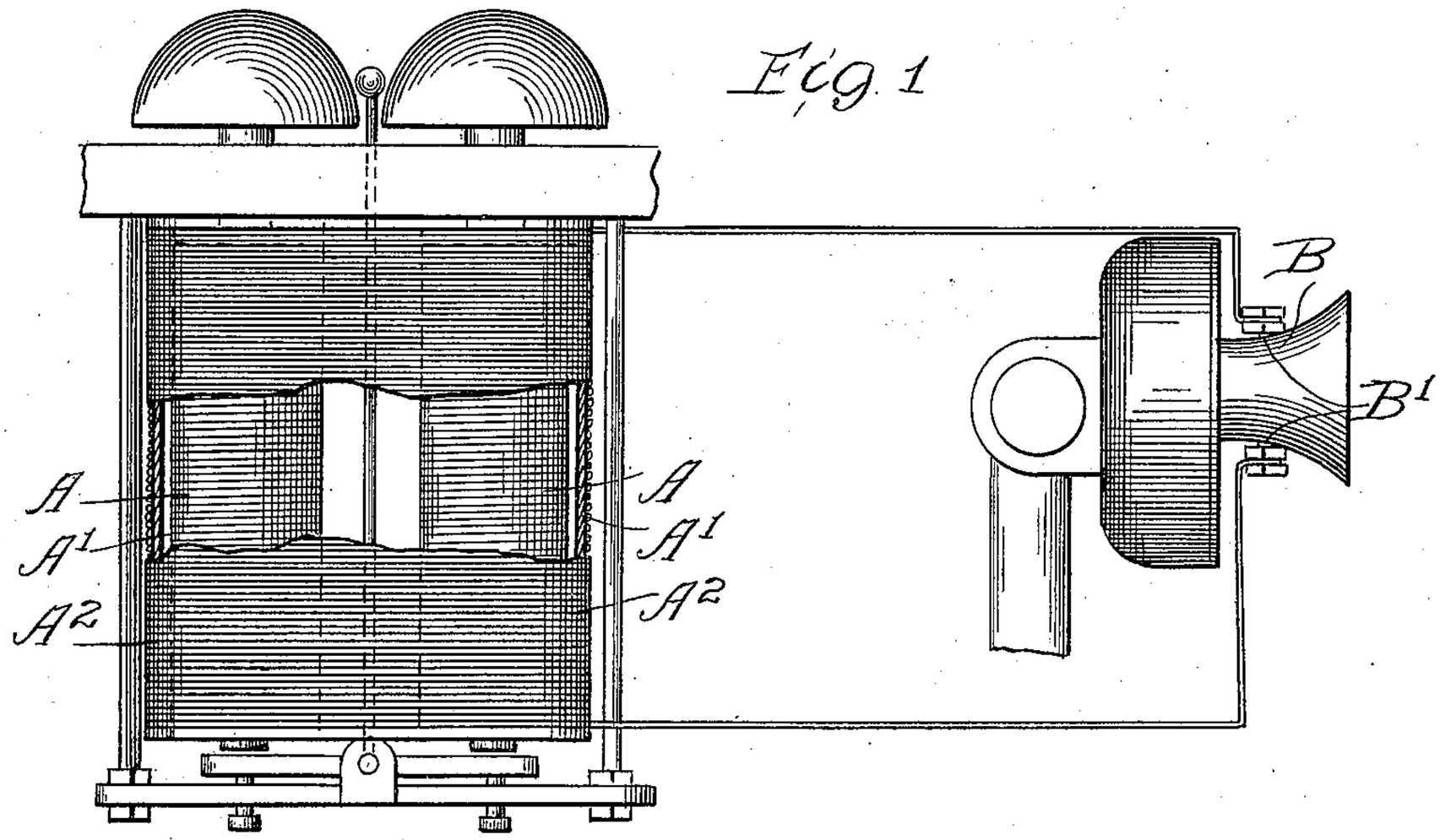


Fig. 2

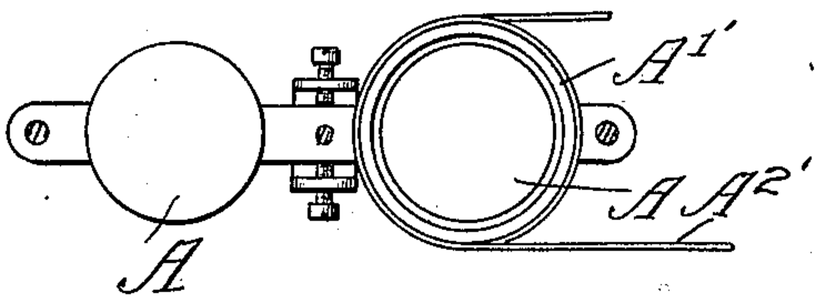


Fig. 3

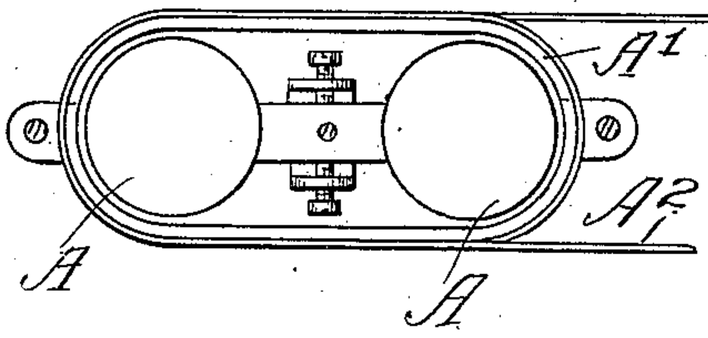


Fig. 4

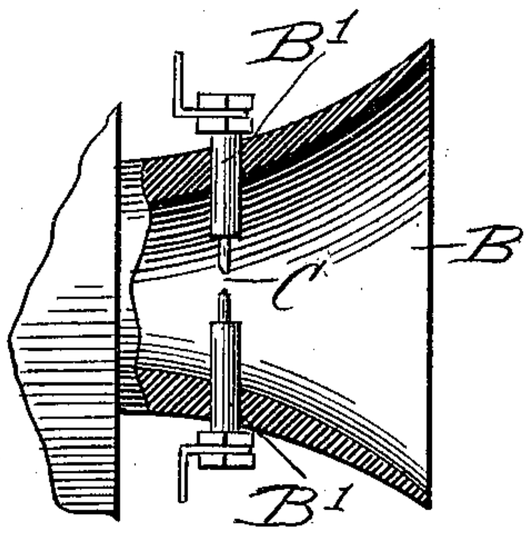
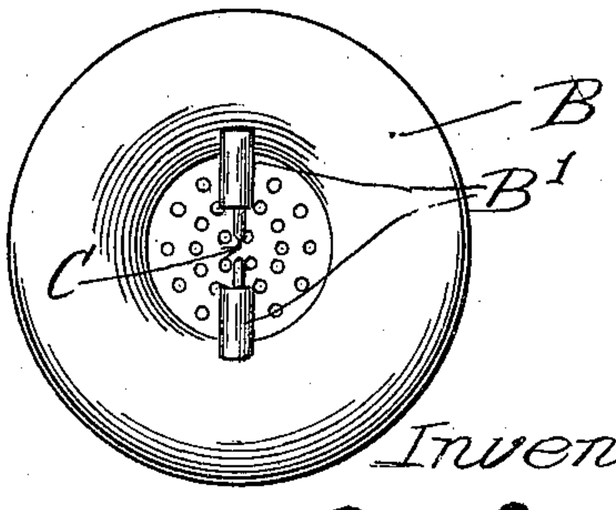


Fig. 5



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UNITED STATES PATENT OFFICE.

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TELEPHONE-DISINFECTOR.

975,346. Specification of Letters Patent. **Patented Nov. 8, 1910.**

Application filed August 29, 1910. Serial No. 579,616.

To all whom it may concern:

Be it known that I, BENJAMIN FULTON GARDNER, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented certain new and useful Improvements in Telephone-Disinfectors, and the annexed specifications and drawings will enable those skilled in the art to make and use the same.

The object of my invention is to purify the air in the mouth-piece of a telephone and to destroy all infectious germs which lodge therein, rendering the atmosphere of a transmitter sweet and pure, and free from danger to the persons using the same.

In order to accomplish the object desired I use the disruptive discharge of an induction coil, the sparking terminals of which are arranged within the mouthpiece of a telephone transmitter. In brief I place a secondary coil around one or both magnets of the ringer mechanism. A circuit extends from the terminals of the secondary coil to the electrodes which are suitably located within the mouthpiece.

The operation is exceedingly simple. When the operator signals a telephone equipped with my invention, the current which energizes the bell magnets establishes an induced current in the secondary coil and with each reversal or make and break of the signal current, disruptive discharges of the secondary current pass through the spark gap between the electrodes within the mouthpiece. The electric sparks continue while the signal circuit is in operation, and cease when the ringing ceases, or when the signal circuit is cut out by removing the receiver from its hook. It will thus be noted the disinfector is in operation simultaneously with the signaling and at no other time. It requires no extra labor upon the part of the operator, and no attention upon the part of the person using the telephone.

Ozonizing and sterilizing by electricity is not new, neither do I claim the method nor the apparatus, further than its application to the telephone and the novel features set forth in the drawings, specifications and claims.

In the drawings Figure 1 is an elevation of my invention with parts broken away and arranged in a telephone, the circuit shown diagrammatically. Fig. 2 is a top plan of a modification showing one coil around one magnet of the ringer mechanism. Fig. 3 is a top plan of Fig. 1 below the frame. Fig. 4 is a central sectional view of a telephone mouthpiece showing electrodes and spark gap.

A. in Figs. 1, 2 and 3 are the electromagnets of the ringer mechanism.

A^1 in Figs. 1, 2 and 3 is a shell or spool of suitable material on which the wire A^2 in Figs. 1, 2, 3 is wound and forms the secondary coil.

B. in Figs. 1, 4 and 5 is a mouthpiece of suitable dielectric material.

B^1 in Figs. 1, 4 and 5 are electrodes arranged within the mouthpiece and C in Figs. 4 and 5 is a sparking gap between the electrodes.

As I make no claim for any part of a telephone other than my invention of a disinfector, further description is not necessary.

It will be understood by persons skilled in the art that the secondary coil A^2 is wound with a sufficient number of turns of wire upon the shell or spool A^1, and placed over the bell magnets; the terminals extending as a circuit to the electrodes B^1, to which the circuit wires are connected as shown in Fig. 1.

When a reversible current is caused to circulate in the coils of the ringer magnets at each reversal of the current, which I designate as the primary current, a secondary current is induced in coil A^2 of my device. Within the circuit of the secondary coil A^2 are electrodes B^1 and a sparking gap C shown in Figs. 4 and 5. The induced current in order to complete its circuit jumps the gap between the electrodes and produces the spark which ozonizes the air and sterilizes the mouthpiece. The sparking will be continuous when the signaling device is operated, and cut out when the talking circuit is used.

Having described my invention and set forth the object to be attained thereby, that which I claim and desire to secure by Letters Patent of the United States is:

1. A telephone disinfector, comprising electrodes fixed in and insulated by the dielectric material of a mouthpiece and suitable means in the signal circuit of a telephone to cause sparks to pass in the gap between the electrodes when the signal is operated.

2. In a telephone disinfector a mouthpiece

of dielectric material, electrodes arranged within the mouthpiece, terminal wires of a secondary coil in direct contact with said electrodes, said secondary coil mounted upon and around the ringer magnets whereby an induced current is established in the secondary coil when the ringer is operated causing sparks within the mouthpiece to sterilize the same.

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