

R. M. LEGGETT.

OZONIZER.

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1,010,777.

Patented Dec. 5, 1911.

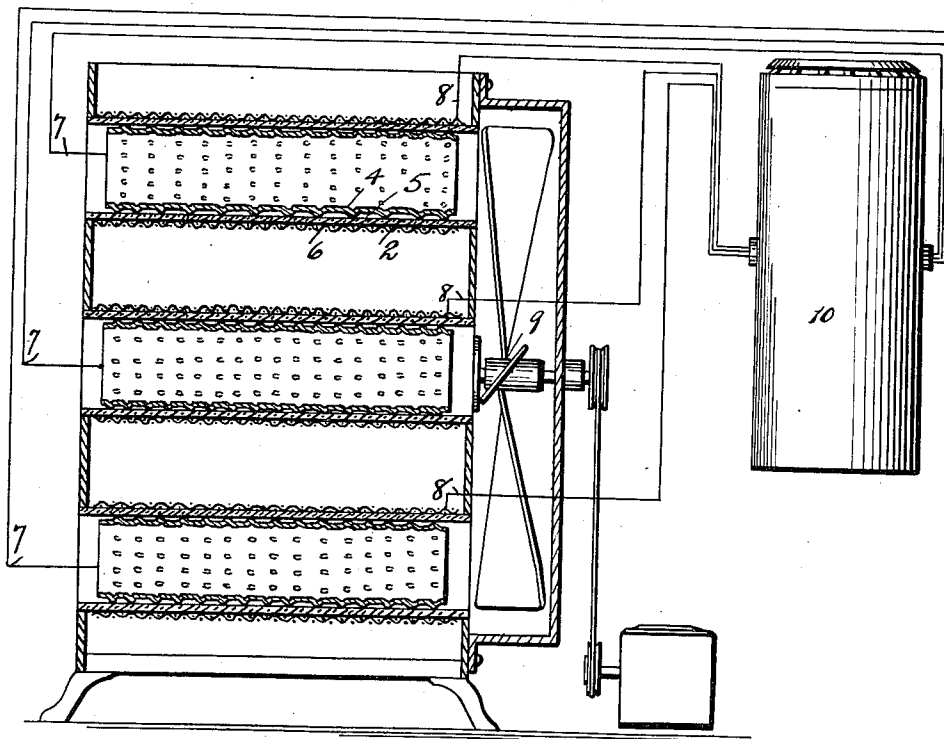


Fig. 2

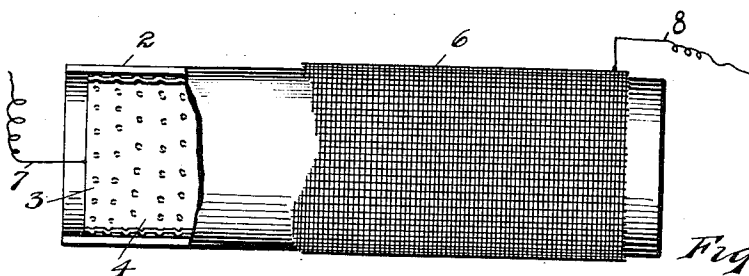


Fig. 1

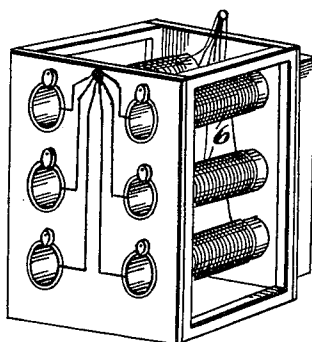


Fig. 4

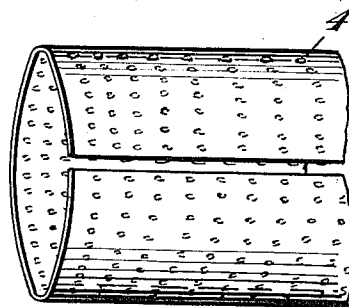


Fig. 3

Witnesses

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ROSS MORTIMER LEGGETT, OF ANN ARBOR, MICHIGAN.

OZONIZER.

1,010,777.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROSS MORTIMER LEGGETT, a citizen of the United States, residing at Ann Arbor, county of Washtenaw, State of Michigan, have invented a certain new and useful Improvement in Ozonizers, and 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 the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to ozonizers.

It has for its object an improved machine adapted to generate ozone from air.

A very common way of producing ozone from atmospheric air is to discharge an electric current of high tension through a dielectric in such a way that the discharge traverses a body of air, and the present invention relates to this class of ozone producers, and has for its object an improved means for increasing the brush character of the discharge from one electrode to another.

In the drawings:—Figure 1, is an elevation partly in section showing the relation of the electrodes. Fig. 2, is a side elevation partly in section indicating the location of several sets of electrodes and the apparatus for producing a current of air to be traversed by the electric discharge. Fig. 3, is a diagram showing on an enlarged scale the electrode at which the brush discharge is formed. Fig. 4, is a perspective showing the arrangement of a plurality of sets of electrodes.

A case 1 is provided with holes for the reception of a number of tubular dielectric bodies, generally glass tubes 2. Within each dielectric body 2 is placed an electrode 3 of sheet metal provided with numerous imperforate projections 4 directed outward toward the dielectric 2. This is preferably made as a piece of sheet metal wrapped into tubular form with the projections extending sufficiently to space the outer surface of the electrode and the inner surface of the dielectric as may be seen by reference to Fig. 2, where the points 4 projecting from the electrode are seen as extending toward the dielectric 2 with a space or chamber 5 lying

between the outer surface of the electrode and the inner surface of the dielectric. Around the outer surface of the dielectric is wound or arranged a second electrode 6. One terminal 7 of the electric transformer is secured to the electrode 3 and the other terminal 8 of the electric conducting wire is secured to the electrode 6. The electrode 6 is preferably of woven wire or similar formative material which acts as a collector of electricity, but permits radiation of any heat that may be developed by the discharge.

In order that the production of ozone may be continuous and at a maximum rate, provision is made to mechanically disturb the air in the annular chamber 5 and in the chamber within the electrode 3 by means of fan 9 driven from any convenient or suitable source of power.

The electric current employed, is, of course, high tension current brought directly from any high tension source as from a step up transformer 10. With a suitable step up transformer, (which forms no part of this invention) and with the use of an alternating current, which is now a common commercial current, no other apparatus is necessary to produce ozone in large quantities than the terminals herein described arranged as herein specified. The air blast is an auxiliary, which forms no part of this invention, but which is useful in producing ozone in large quantities and in delivering it from the place of production to the place of use. Its uses are extremely numerous and with advancing knowledge of its action are constantly becoming more numerous.

What I claim is:—

1. An ozonizer having in combination a tubular dielectric having contained within it and spaced from it an electric terminal of sheet material bent into split tubular form and provided with numerous imperforate projections extending therefrom toward the dielectric, and an electric terminal surrounding said dielectric, substantially as described.

2. An ozonizer having in combination a tubular dielectric having inclosed within it an electric terminal of sheet metal bent into

split tubular form and provided with a plurality of imperforate projections extending toward the dielectric, and a terminal of foraminous material surrounding said dielectric, the said split tubular terminal being spaced from the dielectric, substantially as described.

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

ROSS MORTIMER LEGGETT.

Witnesses:

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