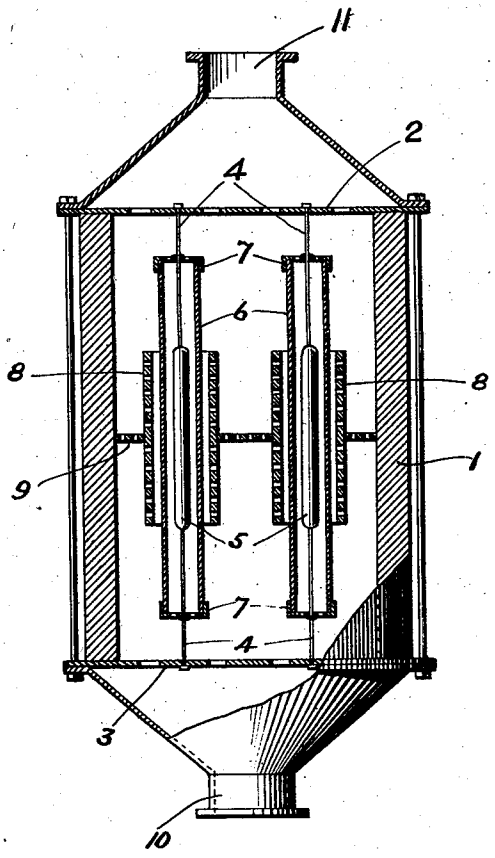
A. VOSMAER.

APPARATUS FOR THE PRODUCTION OF OZONE.

APPLICATION FILED OCT. 22, 1907.

919,403. Patented Apr. 27, 1909.



WITNESSES:

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APPARATUS FOR THE PRODUCTION OF OZONE.

No. 919,403. Specification of Letters Patent. Patented April 27, 1909.

Application filed October 22, 1907. Serial No. 398,560.

To all whom it may concern:

Be it known that I, ALEXANDER VOSMAER, a subject of the Queen of the Netherlands, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have made certain new and useful Improvements in Apparatus for the Production of Ozone, of which the following is a specification.

Objects of the present invention are to provide a durable, reliable and efficient apparatus for ozonizing air or the like; to prevent injury to the di-electric by reason of the effect upon it of heat; and to obviate perforation of the di-electric.

With these objects in view I will proceed to describe an embodiment of my invention and will then claim the invention.

In the accompanying drawings, the figure is a transverse sectional view of an ozonizer embodying features of the invention.

In the drawings 1, is a tubular casing shown as cylindrical, but the word tubular is not used in this description as confined to a circular cross-section, but is intended to include any other cross-section of tubular body. At the heads of this casing there are perforated plates or partitions or supporting frames 2 and 3. Extending between these parts 2 and 3, are a number of rods, bars or the like 4, the intermediate portions of which constitute electrodes or dischargers 5, which may have their surfaces serrated or may be made up of wire netting or gauze.

The electrodes 5, are of tubular form and are arranged concentrically with and within the tubular di-electrics 6. The latter are supported at their ends by means of perforated or otherwise open caps 7, carried by the rods 4, in such a way as to support the di-electrics and permit of some expansion and contraction thereof; for example, the lower cap 7, might be fast on its rod while the upper cap 7, was afforded some up and down motion on the rod. Arranged around and concentric with the di-electrics 6, are tubular electrodes 8, which may be of gauze, perforated metal, or the like. These electrodes 8, are supported and carried by an open frame or perforated partition 9 arranged within the casing 1. It will, of course, be understood that one set of electrodes, as 5, constitute one side of the circuit and the other set of electrodes, as 8, constitute the other side of the circuit and that the parts are properly insulated to bring about an electrical discharge between the electrodes and through the di-electric. The di-electric is spaced at an equal distance from each of the electrodes.

Air or other gas to be treated passes through the casing by way of the openings 10 and 11 formed in the caps that are applied to the ends thereof. In thus passing air or other gas passes both outside and inside of the di-electrics and through the field of electrical action. The fact that the di-electrics are free to expand and contract naturally protects them from breakage due to heating. The spacing of the electrodes at equal distance from the di-electric brings about substantially the same potential difference on each side of the di-electric and in this way the di-electric is protected from undue strains. The tubular form of the units which make up the electrodes insures a large surface so that there is a relatively low current density per square unit and this also tends to protect the di-electric from undue strain.

As shown in the drawings an allowance is not made for the difference in surface between the inside and outside electrode and the di-electric is shown as spaced equally between them. This is done because the difference in surface is considered negligent.

What I claim is;

1. An ozonizer comprising a casing provided with supports and through which air or the like may pass and a plurality of units arranged in the casing and each consisting of a rod carried by two of said supports and provided intermediate of its ends with a tubular discharger or electrode, a tubular di-electric arranged around and clear of and concentrically with the rod, caps for spacing and supporting the di-electric in respect to the rod and for permitting of the passage of air and the like, and a second electrode or discharger arranged concentrically with and around the di-electric and at substantially the same distance from it as the first mentioned electrode and held to place by one of said supports, substantially as described.

2. In an ozonizer the herein described group of units for an electrode each consisting of a rod provided intermediate of its ends with an electrode, a tubular di-electric en-

circling said rod and spaced from and arranged concentrically with it, devices for movably supporting the dielectric in respect to the rod and permitting of the passage of air and the like through it and a second tubular electrode encircling the di-electric and arranged concentrically with it and spaced at substantially the same distance from it as the first mentioned electrode, and means for retaining said last mentioned electrodes in the positions described.

In testimony whereof I have hereunto signed my name in the presence of two witnesses.

ALEXANDER VOSMAER.

Witnesses:
W. J. JACKSON,
FRANK E. FRENCH.