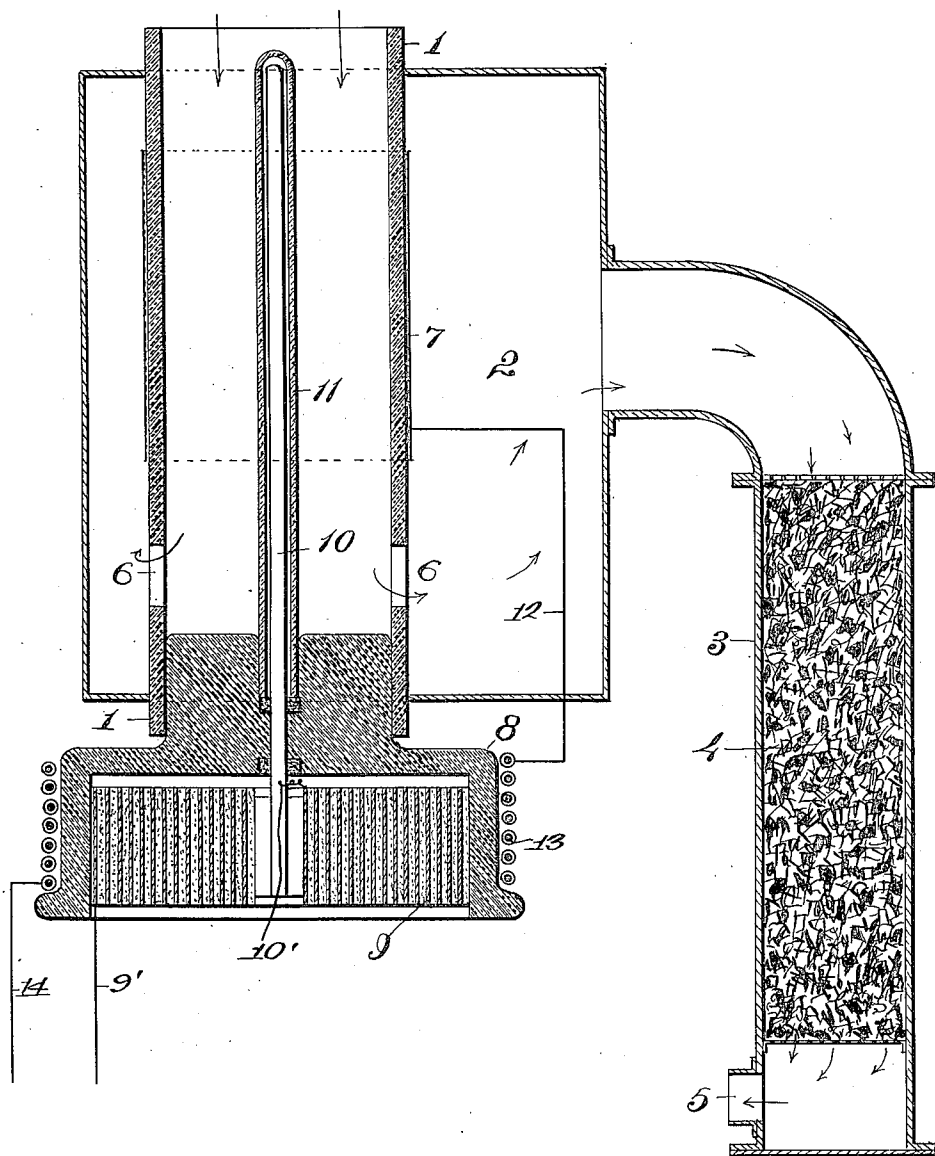


J. E. SEELEY.
OZONE APPARATUS.

APPLICATION FILED AUG. 17, 1911. RENEWED NOV. 28, 1913.

1,102,963.

Patented July 7, 1914.



Witnesses:

J. E. Watson
J. D. Hanson

Inventor:

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By

[Signature]

Atty

UNITED STATES PATENT OFFICE.

JAMES E. SEELEY, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO VULCAN COIL CO., OF
LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

OZONE APPARATUS.

1,102,963.

Specification of Letters Patent.

Patented July 7, 1914.

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To all whom it may concern:

Be it known that I, JAMES E. SEELEY, a citizen of the United States, and a resident of the city and county of Los Angeles, State of California, have invented certain new and useful Improvements in Ozone Apparatus, of which the following is a specification.

My invention has reference to apparatus for generating ozone, and the object is to provide a device which has no exposed metallic terminals, and which will produce ozone free from nitrous oxid or other nitrogenous compounds derived from the constituents of the atmosphere. It is well known that all apparatus of this character produces a greater or less amount of nitrogen, and for the purpose of purifying the product and eliminating the nitrogen I provide a vertical shell, which contains carbon, and through which the ozone passes, all of which will now be set forth in detail.

In the accompanying drawing I show only a single ozone cylinder 1, but in practice I prefer to have a plurality of these cylinders, all connected up with, or in fact, disposed within a conduit 2 which leads to the upper end of a vertically-disposed cylinder 3, which contains crushed carbon 4, the lower end of the cylinder having a discharge pipe 5, which is to be connected with a suction fan or blower, (not shown).

Each cylinder 1 has near its lower end one or more discharge openings 6, the upper end being open, as shown. These cylinders are preferably made of glass, each being surrounded with a metallic screen or netting 7, on the middle portion of the body. This glass cylinder is mounted on a hollow insulating base 8, the hollow within being designed to receive a resonator 9, one terminal 10 of which connects with the lower end of the electrode terminal 10, which passes axially through the base 8, and projects up into a glass tube 11, and the other terminal of the resonator is connected up with one of the wires 9' of the main source of electrical power. This glass tube extends up to the top of the dielectric shell 1, and the metallic electrode is thus protected from contact with

the air. The other electrode terminal 7, is connected by conductor 12, with one terminal of the coil 13, of the resonator, the other terminal of the coil being connected up by wire 14, with the source of electrical power.

In the operation of the apparatus the air is drawn downwardly through the cylinder 3 which thus causes a current to enter the upper end of the ozonating cylinder 1, which thus passes down, within the cylinder, 60 emerging from the opening 6, and is then directed toward the cylinder 3, for the carbon treatment to precipitate the nitrogenous compounds, and the product is then discharged by the blower into suitable receptacles or immediately used.

I may modify the structural form of the apparatus by having the ozonating cylinder terminate at a point near the bottom of the conduit 2, so that the air may thus be discharged all around the lower end of the cylinder instead of through the opening 6.

What I claim as new is:—

1. In ozone apparatus, a resonator, a dielectric tube mounted thereon, and an axially-disposed metallic terminal within the dielectric tube connected up electrically with the resonator, and surrounded with a dielectric tube.

2. In ozone apparatus, a resonator, a dielectric tube mounted thereon, and provided with an exterior coating of metal, and an axially-disposed metallic terminal within the dielectric cylinder, electrically connected with said resonator.

3. In ozone apparatus, a resonator, a dielectric cylinder mounted thereon, with an exterior metallic coating of metal, and an axially-disposed metallic terminal within the dielectric cylinder, electrically connected with the resonator, and a dielectric coating around said inner metallic terminal.

Signed at the city and county of Los Angeles, State of California, in the presence of witnesses.

JAMES E. SEELEY.

Witnesses:

GEO. F. ZIMMER,
R. T. KIRKHAM.