P. C. HEWITT.

VAPOR ELECTRIC LAMP AND CONNECTION.

APPLICATION FILED JULY 11, 1911.

1,014,965.

Patented Jan. 16, 1912.

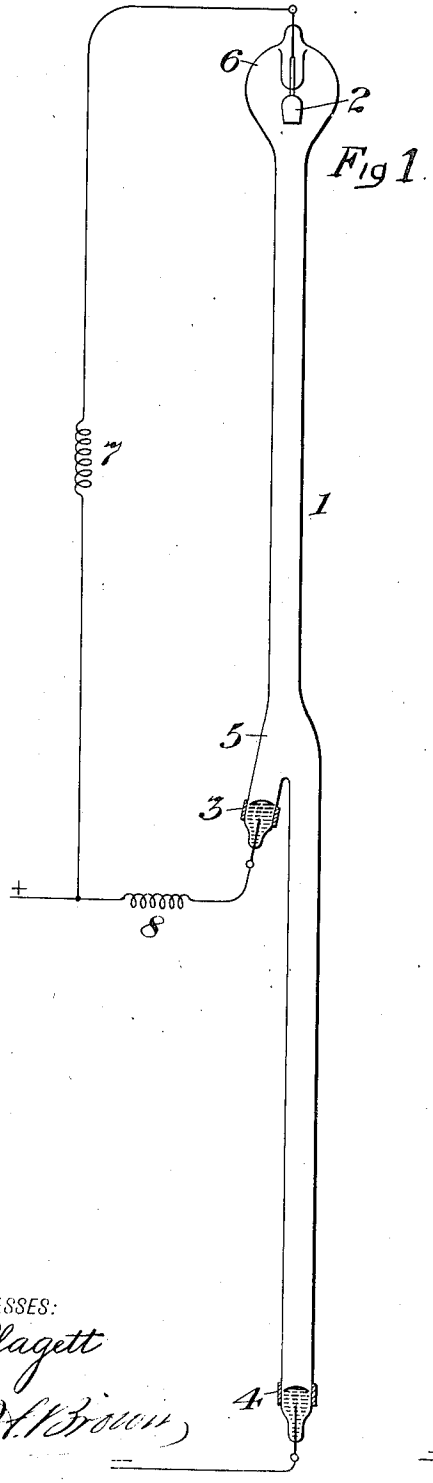

Fig 1.

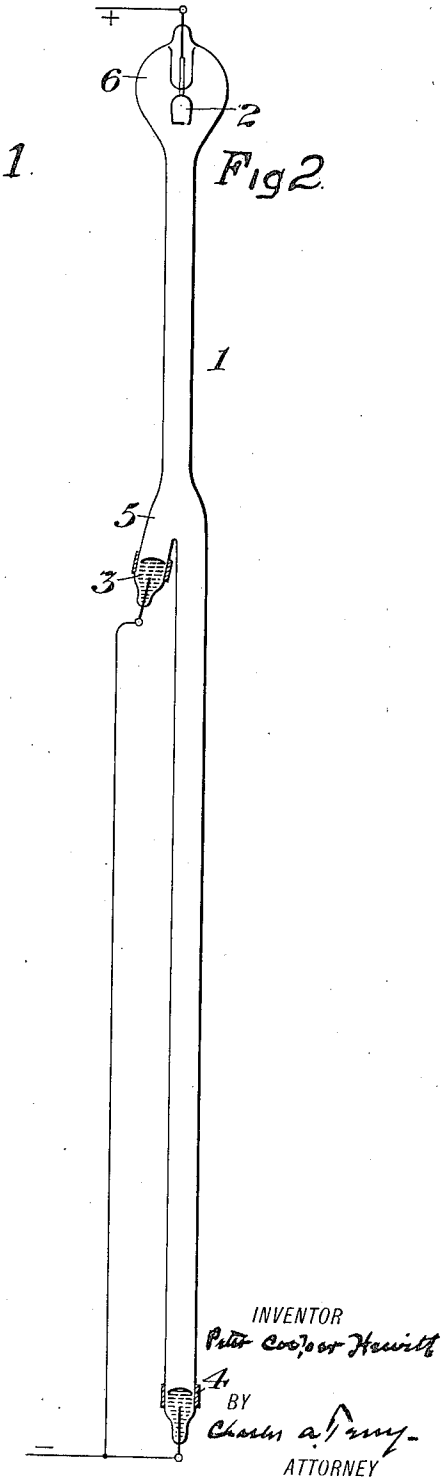

Fig 2.

WITNESSES:

Chas. J. Clagett

Thos. H. Brown

INVENTOR

Peter Cooper Hewitt

BY

Charles A. Terry

ATTORNEY

UNITED STATES PATENT OFFICE.

PETER COOPER HEWITT, OF RINGWOOD MANOR, NEW JERSEY, ASSIGNOR TO COOPER HEWITT ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

VAPOR ELECTRIC LAMP AND CONNECTION.

1,014,965. Specification of Letters Patent. Patented Jan. 16, 1912.

Original application filed March 19, 1903, Serial No. 148,504. Divided and this application filed July 11, 1911. Serial No. 637,951.

To all whom it may concern:

Be it known that I, PETER COOPER HEWITT, a citizen of the United States, and resident of Ringwood Manor, county of Passaic, State of New Jersey, have invented certain new and useful Improvements in Vapor Electric Lamps and Connections, of which the following is a specification.

The present invention relates to an electrical apparatus in which a suitable gas or vapor inclosed in a transparent container is made luminous by the passage of electric current.

The type of apparatus illustrated is adapted for various uses, and the novel features of the said device will be explained in the specification and fully set forth in the claims.

The illustrations, Figures 1 and 2, show similar types of electrical apparatus of this sort, the main difference appearing in the electrical connections for the lamp.

The container consists of a tube, 1, of glass or other transparent material, provided with electrodes, 2, 3 and 4. The electrode 2 is here shown as a body of solid conducting material such as iron, while the electrodes 3 and 4 appear as small masses of mercury. Any suitable materials may be substituted for those named.

The electrodes 2 and 4 are mounted at the opposite ends of the tube 1, and the electrode 3 is contained in a small pocket, 5, formed on the container 1 about midway of its length.

The device is provided with a chamber 6 at the top serving as a cooling or condensing chamber whereby the vapors formed in the operation of the lamp are condensed and the general capacity of the device for radiating heat is increased.

In Fig. 1, the electrodes 2 and 3 are connected with the positive side of an electric circuit and the electrode 4 with the negative side. In Fig. 2, the electrode 2 is positive and the electrodes 3 and 4 are negative.

I may interpose suitable resistances or inductance devices, 7 and 8, in the wires leading to the electrodes, as may be desired or required for different uses of the apparatus and for steadying the operation thereof.

In the lamp illustrated in Fig. 2, it is found that the vapor in the lower part of the lamp is denser than in the upper part, the quantity of current passing through the said lower half being approximately double that passing through the upper half. The apparatus may be used in testing the operations which take place in an inclosed gas or vapor carrying electric current, or it may be utilized for producing different effects in different parts of a single inclosing chamber.

Fig. 2 is made use of simply to illustrate a different set of connections for the electrodes, and it will be understood that these connections may be still further varied to suit different requirements, at the will of the operator.

In operating this lamp the mercury which is condensed in the chamber 6 is redistributed for condensation, passing down the tube into the pocket 5 and overflowing from that pocket into the lower part of the tube and there re-constructing the electrode 4. This is found to be a valuable feature of the lamp and is one of the features constituting the present invention.

This application is a division of my application filed March 19, 1903, Serial Number 148,504.

I claim as my invention:

1. In a system of electrical distribution, the combination with a gas or vapor electric apparatus containing a plurality of anodes and a vaporizable reconstructing cathode, of a source of electric current, leads from the several electrodes to the source and means for storing and restoring energy in the anode leads, said means consisting of suitable inductances.

2. In a system of electrical distribution, the combination with a gas or vapor electric device containing a plurality of anodes and a vaporizable reconstructing cathode, of leads from the several electrodes to the supply and suitable inductances, one located in each anode lead.

3. In a system of electrical distribution, the combination with a gas or vapor electric apparatus including a vaporizable reconstructing cathode, of a supply of electric energy leads from the several electrodes to the supply, two anode leads being connected

to the same point therein and means for controlling the flow of current to the anodes and preventing the robbing of one anode of current by the other anode, said means consisting of suitable inductances in the several anode leads.

Signed at New York, in the county of New York, and State of New York, this 7th day of July, A. D. 1911.

PETER COOPER HEWITT.

Witnesses:
L. A. COLEMAN,
R. G. HEWITT.