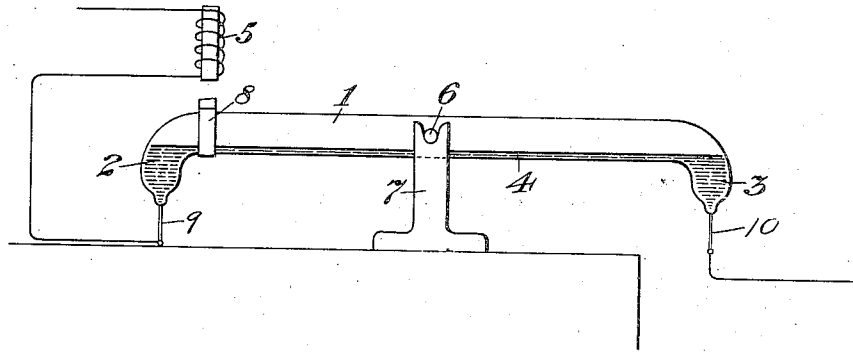


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VAPOR ELECTRIC DEVICE.
APPLICATION FILED JULY 24, 1905.

1,052,057.

Patented Feb. 4, 1913.



WITNESSES:

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UNITED STATES PATENT OFFICE

PETER COOPER HEWITT, OF NEW YORK, N. Y., ASSIGNOR TO COOPER HEWITT ELECTRIC COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

VAPOR ELECTRIC DEVICE.

1,052,057.

Specification of Letters Patent.

Patented Feb. 4, 1913.

Application filed July 24, 1905. Serial No. 270,903.

To all whom it may concern:

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

The present invention relates to means for starting into operation vapor electric devices such as are represented by the well-known mercury vapor lamp.

The invention is applicable to devices of the same general character whether used as sources of light or for any other purpose.

In the devices herein described there is an exhausted container in which are included two or more electrodes which in the present instance are illustrated as being two in number and as being composed of mercury.

The device is herein represented as a mercury vapor lamp, this being, however, merely by way of convenience and to avoid complication in description.

The container of the device is provided with trunnions by means of which it may be pivotally mounted on suitable supports and means are shown for tilting the lamp automatically, say by the employment of an electro-magnet or some other convenient automatic device. Of course, the lamp may be tilted by hand if, for any reason, such an operation is desirable or preferred. In the non-operating position of the apparatus the electrodes are connected by a bridge of mercury which bridge is caused to separate by the tilting operation and thereby establish a flow of current initially through a small portion of the vapor and eventually through the entire vapor path within the lamp.

I have illustrated my invention in a single figure of drawing which is an elevation of a lamp suited for the purpose herein described.

In the drawing 1 is the container of glass or other suitable transparent material, and 2 and 3 are, respectively, the positive and negative electrodes of the apparatus. The

electrodes 2 and 3 are normally connected by a bridge, 4, of mercury during such time as the apparatus is not operating. When, however, the apparatus is tilted, say by the energization of the electro-magnet, 5, or by manual means, the mercury flows toward the electrode 3 and the excess is collected at the electrode 2, thus establishing the two electrodes at opposite ends of the apparatus with a vapor path between. During this shifting of the mercury, the current passes through an ever widening portion of vapor until a current flow is set up through the entire device, whereupon the apparatus is established in operating condition.

To permit of the easy turning of the device, trunnions are provided on opposite sides of the container, said trunnions resting in grooves or notches in suitable supports. One of the said trunnions is shown at 6 and one of the supports at 7.

To provide an armature for the electro-magnet 5 a band 8 of magnetic material may be caused to surround the container 1 and place in operative relation the core of the said magnet. Suitable lead-wires 9 and 10 run to the positive and negative electrodes, respectively.

Should the apparatus be designed for other uses than those of giving light, say to serve the purpose of a converter, the container may be made of transparent material, although such a construction is usually preferred.

I claim as my invention:

A mercury vapor lamp, comprising an exhausted container, a relatively long straight tubular light giving portion of said container, mercury electrodes in said container, suitable leads therefor, trunnions centrally mounted on said tubular portion, said trunnions providing a horizontal axis perpendicular to the axis of the tubular portion and means for maintaining said tubular portion in a strictly horizontal position in the non-operating condition, together with an excess of mercury within said container whereby a thin layer of mercury connecting

the electrodes lies along the bottom of the
tubular portion, and an electric magnet re-
sponsive to current traversing said mercury
connection for slightly tilting the container
5 out of the initial horizontal position, said
magnet operating upon a magnet armature
attached to one end of the tubular portion.

Signed at New York, in the county of
New York, and State of New York, this
20th day of July, A. D. 1905.

PETER COOPER HEWITT.

Witnesses:

WM. H. CAPEL,

GEORGE H. STOCKBRIDGE.
