

May 28, 1929.

W. F. HENDRY

1,715,326

ELECTRODE FOR DISCHARGE TUBES

Filed Dec. 29, 1926

Fig. 1.

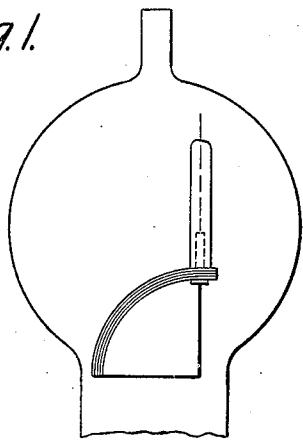


Fig. 2.

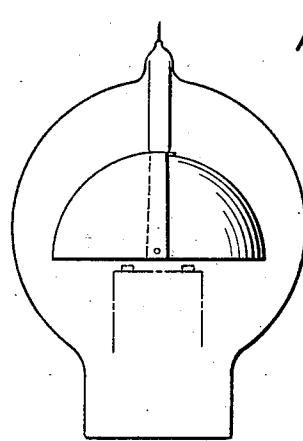


Fig. 3.

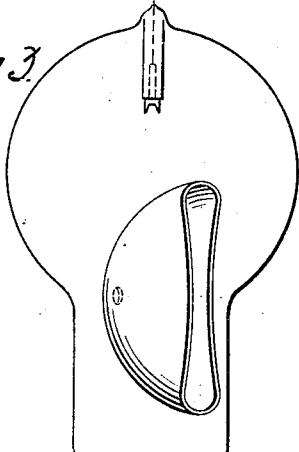


Fig. 4.

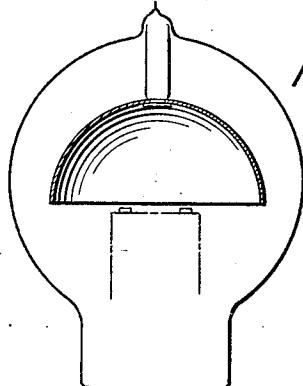


Fig. 5.

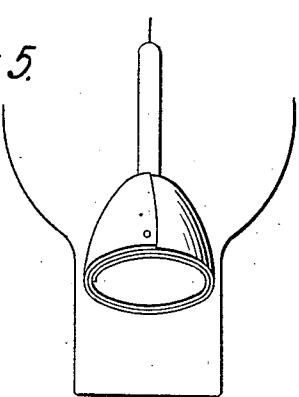
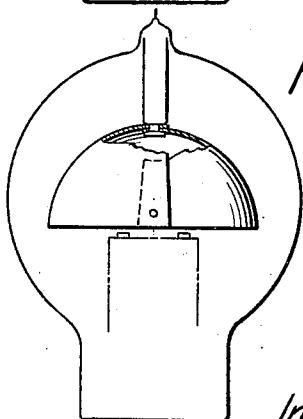


Fig. 6.



Inventor

WILLIAM F. HENDRY

by Paul Tolisch
His Atty

Patented May 28, 1929.

1,715,326

UNITED STATES PATENT OFFICE.

WILLIAM F. HENDRY, OF OSSINING, NEW YORK, ASSIGNOR TO MANHATTAN ELECTRICAL SUPPLY COMPANY, INC., A CORPORATION OF MASSACHUSETTS.

ELECTRODE FOR DISCHARGE TUBES.

Application filed December 29, 1926. Serial No. 157,699.

This invention relates to tubes having internal electrodes and relates more particularly to a method and means whereby large electrodes may be placed inside tubes through 5 openings that are too small to pass a normal electrode.

The object of my invention is to so construct an electrode that it may be reduced in size and hence be inserted inside a tube envelope through an opening of smaller diameter 10 than that of a normal electrode.

Certain types of discharge tubes, for example rectifiers, known to the art, are now provided with an electrode of a size so large 15 that it is extremely difficult to construct a satisfactory tube cheaply and efficiently due to the difficulty of assembling the large electrode within the envelope. Certain of the tubes now in use have a narrow bottle neck 20 with an enlarged body portion and it is to this type of tube which my invention more particularly applies.

The invention will be more readily understood by reference to the accompanying 25 drawing and description thereof which follows:

Figs. 1 to 6 of the drawing represent tubes having electrodes constructed according to the invention. Figs. 1, 3 and 5 show the 30 electrodes as they appear when they are inserted through the bottle neck, while Figs. 2, 4 and 6 are showings of the electrodes when mounted in the operative position inside the tube.

Fig. 1 of the drawings shows a tube having a normally hemispherical electrode made of a plurality of pieces and the pieces all overlapped and adjusted to the same position so that the electrode may be inserted through 35 the narrow neck of the tube, then expanded to its normal size and riveted in shape as shown in Fig. 2.

Fig. 3 shows a modification of the invention wherein the electrode is forced into a somewhat flat shape before it is inserted into the envelope and thereafter expanded to its normal shape as shown in Fig. 4.

Fig. 5 shows still another modification wherein the electrode is made of a single piece 50 and rolled up into a smaller diameter whereby the electrode may be readily inserted

through the bottle neck into the envelope and then be unrolled and riveted in its final shape.

It is in many cases a marked advantage to have a very large electrode inside a tube of small dimensions and now by an arrangement as illustrated above a discharge tube having a small neck opening in the envelope may easily be made with a large internal electrode. In tubes of the prior art the size of the electrode 55 has been limited practically by the size of the opening into the envelope.

I have illustrated three forms which my invention may take but do not intend to be limited to the specific forms shown as other 60 means of carrying out the invention will readily occur to one skilled in the art.

I desire to be limited only to the extent set forth in the appended claims.

What I claim is:

1. In an electrical discharge tube having a small opening through which a large electrode must be inserted in assembling the tube, an electrode inside the tube having a normal operating form in the shape of a hollow cup 75 too large to be inserted through the opening in the tube, said electrode comprising a rotatable portion by virtue of which the size of the electrode may be reduced sufficiently to allow it to pass through the opening in the said tube. 80

2. An electrical discharge tube comprising a hollow hemispherical electrode made in a plurality of sections interleavably mounted on a common pivot point and secured against relative movement. 85

3. An electrode for an electrical discharge tube, comprising a plurality of sections collapsibly mounted on a common pivot whereby the electrode may be collapsed to pass through a relatively small opening in the tube. 90

4. A hemispherical electrode for an electrical discharge tube comprising a plurality of hemispherical electrode forming elements movably hinged to a common point whereby the said electrode may be reduced in size, and having means for maintaining the said plurality of portions in a fixed position relative to each other. 95

In testimony whereof, I have signed my name to this specification, this 27th day of December, 1926.

WILLIAM F. HENDRY.