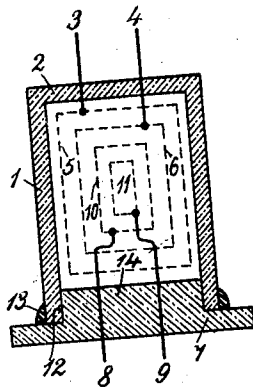


March 28, 1939.

O. BAIER
ELECTRIC DISCHARGE VESSEL
Filed Jan. 30, 1937

2,151,885



Inventor:
Otto Baier
by *R. C. Hopgood.*
Attorney

UNITED STATES PATENT OFFICE

2,151,885

ELECTRIC DISCHARGE VESSEL

Otto Baier, Berlin-Reinickendorf, Germany, assignor to C. Lorenz Aktiengesellschaft, Berlin-Tempelhof, Germany, a company

Application January 30, 1937, Serial No. 123,204
In Germany January 30, 1936

4 Claims. (Cl. 250—27.5)

In the manufacture of electric discharge devices having vessels, ceramic materials have come into use from which properly proportioned parts may be produced. The invention makes use of this property in order to assemble ceramic parts of a discharge vessel without the aid of special means such as gauges or the like. Such parts may be fitted with the electrodes of the discharge tube. The requisite melting operations are preferably effected in a furnace.

The invention is described hereafter by way of example, reference being had to the accompanying drawing which is a sectional view of an electron tube as provided in accordance with the invention.

The vacuum vessel consists of a cylindrical part 1 formed integral with an end wall or bottom 2 by any customary method and has a cover 7. Bottom 2 carries two conductors 3, 4 fastened to electrodes 5, 6. Cover 7 carries two conductors 8, 9 fixed to electrodes 10, 11. The electrodes are shown in dotted lines and in a purely diagrammatic manner since they are immaterial to the invention. Cover 7 has a central projection 14 which fits the inside of the cylinder 1, this being attained by machining or grinding the perimeter 12 of the projection 14.

In this way it is possible to fix the electrodes to the ceramic parts 2, 7 and then to assemble these without the aid of special means such as gauges or the like.

Preferably, cover 7 is fastened to cylinder 1 by a glass seal 13, the melting being effected in a furnace. In performing this the ceramic parts can not get warped since they have been fired at

higher temperatures than is required for melting the glass seal.

What is claimed is:

1. In an electric discharge device, a plurality of parts of a material having a relatively high melting point and which when assembled form a vessel enclosed on all sides, electrodes projecting from each part within the vessel, and a seal of relatively low melting point for the junctures of said parts.

2. In an electric discharge device, two parts of ceramic material so shaped that when assembled they form a vessel enclosed on all sides, electrodes projecting from each part within said vessel, and a seal of glass melting at lower temperatures than said ceramic material covering the juncture of said parts.

3. In an electric discharge device, a hollow body of ceramic material open on one side, electrodes mounted on said body and projecting within the chamber formed by the body, a ceramic stopper for the open side of said body, electrodes projecting from said stopper within said chamber, and a glass seal covering the juncture of said body and stopper.

4. In an electric discharge device, a cylinder of ceramic material closed on one side, electrodes mounted on the closed side, a plug of ceramic material projecting into said cylinder and having a shoulder against which the edge of the cylinder abuts, electrodes mounted on said plug and projecting within said cylinder, and an outside glass seal surrounding the cylinder and said shoulder at their juncture.

OTTO BAIER. 35