

ALIEN PROPERTY CUSTODIAN

ELECTRON TUBE GRID

Max Vantler, Berlin, Germany; vested in the
Alien Property Custodian

No Drawing. Application filed October 3, 1940

The present invention relates to electron tubes and more particularly to the construction of a grid in such tubes.

In amplifying electron tubes the temperature of a grid is not allowed to become so high that emission layers on the grid (which are nearly impossible to be avoided) are able to emit electrons. It is well known to improve the cooling of a grid usually consisting of molybdenum wires by using copper rods as supporting means, and also to provide these rods at their ends with cooling wings also made of copper. It is also known to build the supporting rods of a copper core with a nickel sheet.

In practice, however, it has been observed that this way of cooling is not sufficient on account

of the bad heat conductivity of the molybdenum wires and their free length.

According to the present invention the cooling of the grid is considerably improved by covering the molybdenum with a coating of copper or silver. That may be done mechanically or galvanically before the wire is wound upon the rods. Applicant prefers, however, to coat the complete grid galvanically.

By the described coating the longitudinal heat conductivity of the grid wires is sufficiently increased and, at the same time, the advantage is obtained that the coating, especially of copper, is less able to become emissive than molybdenum.

MAX VANTLER.