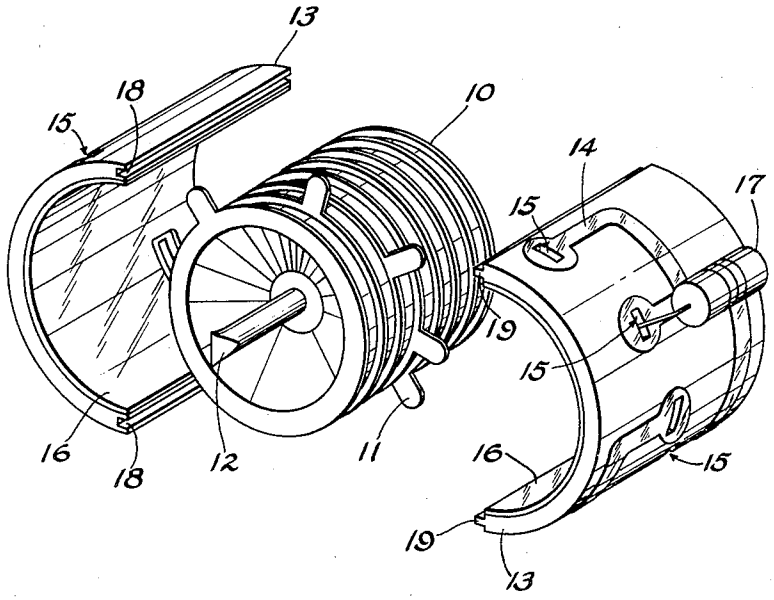
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TUBE SOCKET

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TUBE SOCKET

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3 Claims. (Cl. 339—143)

This invention relates to tube sockets and more particularly to a novel tube socket for use with tubes having a plurality of terminals extending radially from the principal axis thereof.

Prior tube sockets for this particular type of electron tube have been expensive and cumbersome to build. The tube type is well known in the electronic industry, and an improved tube socket for mounting this tube is needed. A feature of this invention is a tube socket which will compactly and economically house this particular type of electron tube. Another feature of this tube socket is its adaptability to the passage of cooling air over the tube.

It is an object of this invention to provide a tube socket for a tube having a plurality of terminals extending radially from the plane of the principal axis thereof which is economical to construct and which provides extremely good impedance characteristics for the tube. It is a further object of this invention to provide a tube socket for the subject type tube which rigidly supports the tube so that the tube will withstand vibration and shock exceedingly well. It is a still further object of this invention to provide a tube socket which is easily assembled and which by the use of printed circuitry reduces the weight of the tube socket. It is still another object of this invention to provide a tube socket for the subject type tube where shielding means may be easily and economically added to the socket.

These and other objects of this invention will become apparent when the following description is read in conjunction with the accompanying drawing, the single figure of which is an exploded isometric view of one embodiment of this invention in relation to the subject type tube.

Referring now to the single figure, the tube **10**, which is of a well-known construction and may be commercially purchased, has a plurality of radial fins or projections **11** extending therefrom. These projections are terminals of the particular elements of the tube which protrude radially from planes perpendicular to the axis of the tube. The axis of the tube is along the member **12**. Surrounding the tube **10** is a pair of semicylindrical printed circuit boards. These printed circuit boards may be formed by any of the well-known printed circuit techniques and include a non-conducting sheet of material **13** having imposed thereon strips of conducting material **14**. These strips **14** may be arranged to connect the projections **11** in any manner required by the circuitry in

which the tube **10** is to be used. Also provided are a plurality of openings **15** cut through the non-conducting sheet **13** and through the strips **14**. These openings **15** are so arranged that an individual one of the projections **11** of the tube **10** will fit into each of the openings **15**. The strips of conductive material which form the printed circuit thereby connect the elements of the tube to the exterior circuitry through the connection of external components such as the resistance element **17**. It is obvious that the external components may be easily attached to the various elements of the tube **10** by soldering them to the projections fitting into the openings **15**.

The tube socket of this invention has an inner surface of conductive material. This material might be such as copper which could be impressed on the inner surface of the tube socket. This copper cladding might be placed on the inner surface by some of the well-known methods of forming printed circuits. Such an inner surface will improve the shielding characteristics of the socket. This inner surface need not be clad in a conductive material if the increased shielding is not required. It is also obvious that the inner surface **16** could be formed into additional printed circuits if such printed circuits would aid the economical connection between the various elements of the tube and the external components. The two semcylindrical printed circuit boards are fitted into each other by means of the projections and slots or tongues and grooves **19** and **18** respectively, through it is obvious that any suitable means may be used to hold the two portions of the socket together.

Although this invention has been defined with respect to a particular embodiment thereof, it is not to be so limited as changes and modifications may be made therein which are within the full intended scope of the invention as defined by the appended claims.

What is claimed is:

1. A tube socket for tubes having a plurality of terminals extending radially from the principal axis thereof comprising a pair of rigid semicylindrical members, said semicylindrical members individually comprising a sheet of non-conductive material having conductive strips arranged in a predetermined manner on the outer surface thereof, said semicylindrical members having a plurality of openings cut therein, said openings being related to said terminals and said conductive strips whereby when said semicylindrical members are formed into a cylindrical member the tube is mounted inside said cylindrical member with said terminals projecting through said openings in said semicylindrical members.

2. A tube socket as defined in claim 1 wherein the inner surface of said semicylindrical members is clad with a conductive material except adjacent said openings.

3. A tube socket as defined in claim 1 where said semicylindrical members are tongued and grooved in the non-conductive material so said semicylindrical members will be formed into a cylinder.

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