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ADAPTER

Filed June 23, 1927

Fig. 1

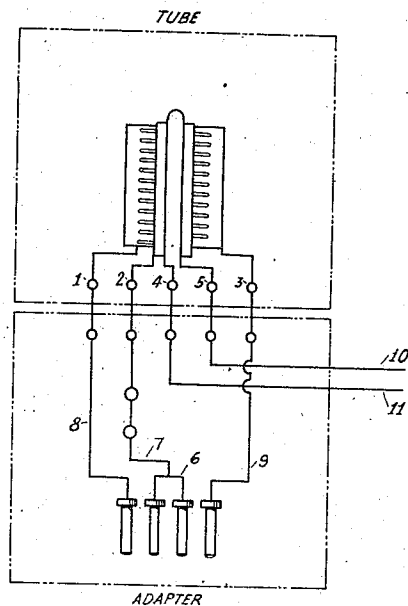


Fig. 2

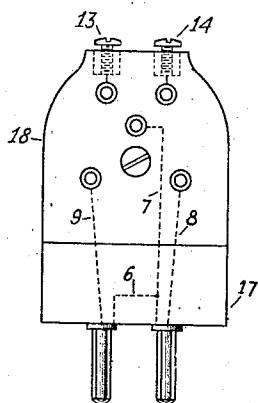
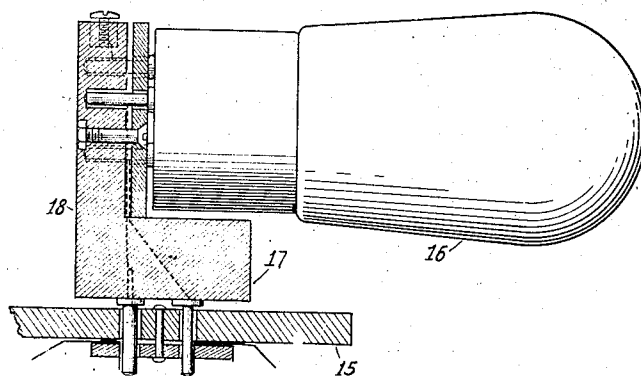


Fig. 3



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ADAPTER.

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This invention relates to an adapter and more particularly to an adapter for utilizing a tube operated by an alternating current in a base for a tube operated by a direct current.

Most receivers at the present time make use of direct current tubes, that is, tubes in which the electron emitting element is energized or heated by means of a direct current. These tubes are of a well known type and have the usual four prongs leading to the plate, grid and filament of the tube. Recently there has been marketed an alternating current tube of the heater type which requires five terminals, one leading to the plate of the tube, one to the grid, one to the equi-potential cathode of the tube, and two to the heater element of the tube. In order to utilize such a tube in the ordinary receiving set which has a base adapted for the reception of four prong tubes, it is an object of my invention to provide an adapter by means of which the heater type of tube may be readily used in such a set.

In some receiving sets the space between the top of the tube and the lid is very small. If it is desired to use a different type of tube without changing the tube bases in those sets, by means of elements inserted between the bases and the new tubes, it is clear that in many cases, due to the increase in height of the new tube and element, the lid of the receiving set cannot be closed. Therefore, another object of this invention is to provide an adapter element whereby the vertical height taken up by the new tube and adapter will be equal to or less than that taken up by the old tube and original base. This is accomplished by providing an adapter by means of which the new tube may be held in position at an angle to that taken by the old tube in its original position.

My invention shall be more fully described hereinafter by the aid of the accompanying drawing in which

Fig. 1 is a schematic showing of the connections made by my improved adapter;

Fig. 2 is a front view of my adapter; and

Fig. 3 is a sectional view of my adapter with a heater type tube inserted therein.

Referring to Fig. 1 numerals 1, 2, and 3 indicate tube terminals leading to the grid, equi-potential cathode and plate of the alternating current operated tube shown diagrammatically in that figure. Numerals 4 and 5 indicate the heater terminals of that tube.

The lower portion of Fig. 1 shows the connections made within the adapter itself. The four prongs indicated there are adapted as shown in Fig. 3 to be inserted into a direct current base of the four socket type. As shown, the direct current connections are connected together by connection 6 and a lead 7 is provided from that connection to a socket member in the adapter leading to the equi-potential cathode. Connections 8 and 9 are for connecting the grid socket connection and the plate socket connection of the receiver base to the grid and plate respectively of the alternating current operated tube. The heater connections 10 and 11 are brought to a convenient point on the adapter as shown in Fig. 2 at screw terminals 13 and 14. If so desired, additional terminals may be placed in series with connector 7 for the purpose of inserting a biasing potential as is well known in the art.

Fig. 3 shows the adapter and tube in place. 15 indicates the tube cradle or base of the receiving set and 16 shows diagrammatically the tube. Legs 17 and 18 of the adapter are at right angles to one another for the purpose of holding the tube horizontally. In this manner no additional height is required by the use of my adapter and its use will permit the closing of the lid of the receiving set.

While I have shown but one form of my invention I do not intend to be limited thereby except as indicated by the appended claims:

I claim as my invention:

1. An adapter for utilizing a five prong tube in a four prong base having two portions at substantially right angles to each other, one of which has four prongs and the other of which has five sockets.

2. An adapter for utilizing a five prong tube in a four prong base having two portions at substantially right angles to each other, one of which has four prongs and the other of which has five sockets, said five prong tube, when inserted in said portion having five sockets, being held in a horizontal position.

3. An adapter for utilizing a five prong tube, in which the electron emitting element

is energized by an alternating current, in a base having four contacts, comprising an angled element, one of the legs of said angled element having four prongs and the other leg
5 of said element adapted to support a five prong tube.

4. An adapter for utilizing a five prong alternating current tube in a base having four contacts, comprising a right angled element
10 one of the angular legs of said element having four prongs and the other leg of said angled element having five sockets for supporting a five prong tube.

5. An adapter for utilizing a five prong
15 alternating current tube, in a four prong base for a direct current tube, comprising a right angled element one of the legs of said right angled element having four prongs thereon for insertion into a four prong base and a

connection therein for connecting together
20 two of said prongs.

6. An adapter for utilizing a five prong tube, whose electron emitting element is adapted to be heated by an alternating current, in a four socket base designed for a tube
25 whose electron emitting element is to be heated by a direct current, comprising a member having two legs at right angles, four prongs on one of said legs adapted for insertion into the sockets of said four socketed base, a connection in said leg for connecting together
30 two of said prongs, connections from said connection and from the other two prongs of said leg to three socket members on the other leg and means for connecting a pair of external connectors to two other socket mem-
35 bers on said other leg.

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