

Dec. 12, 1933.

D. H. MILLS

1,939,130

RADIO BASE CONSTRUCTION

Filed April 14, 1931

3 Sheets-Sheet 1

Fig. 1.

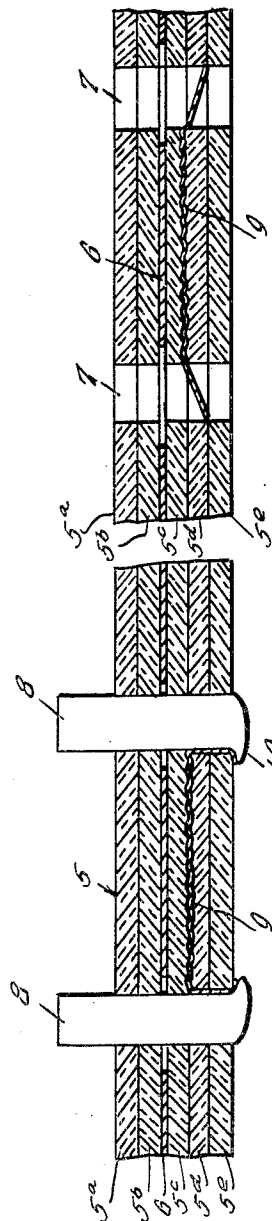
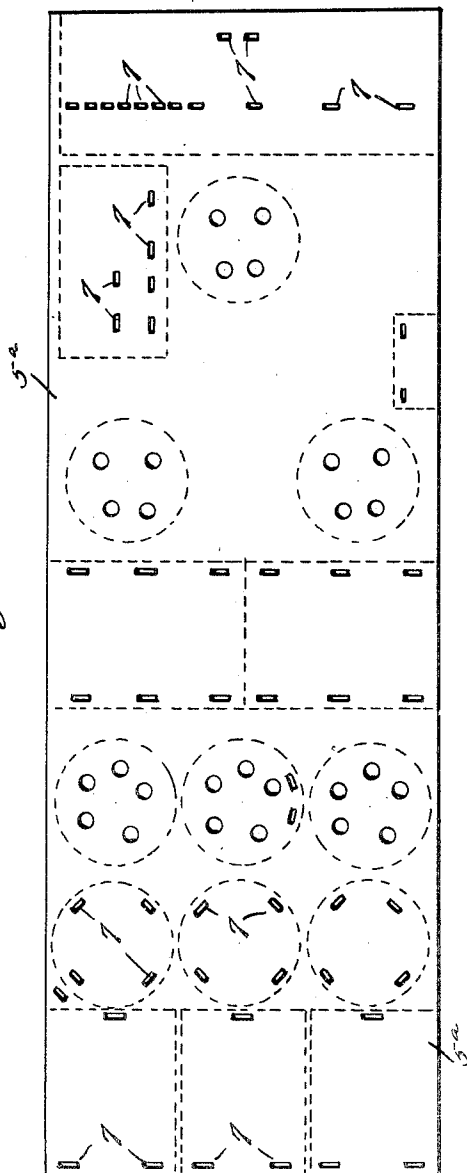


Fig. 5.

Fig. 4.

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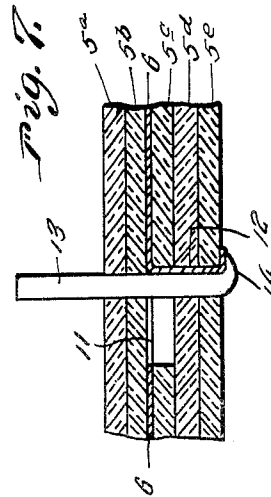
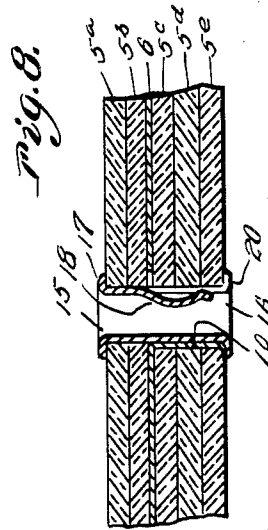
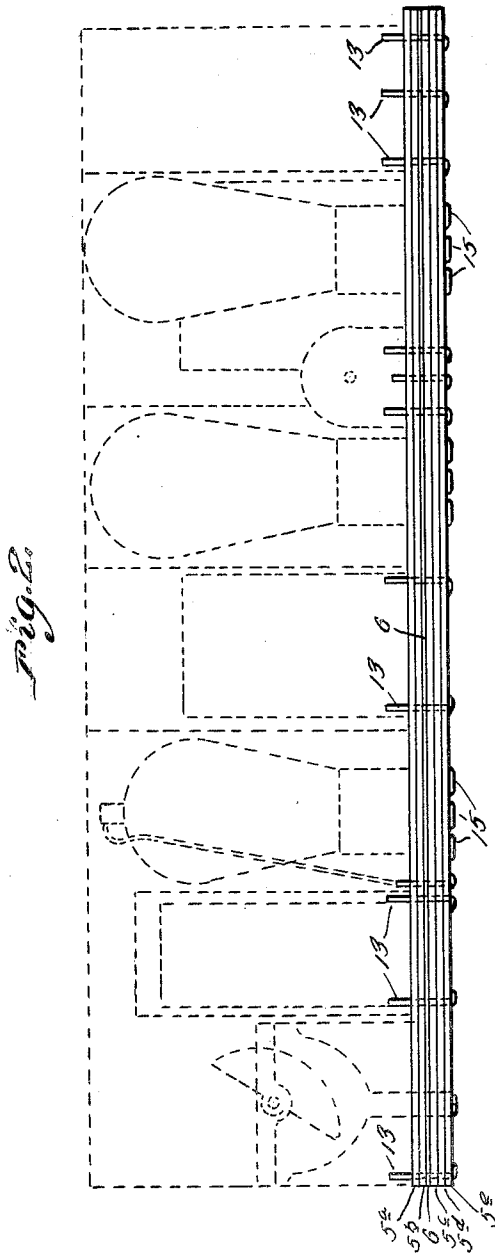
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RADIO BASE CONSTRUCTION

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3 Sheets-Sheet 2



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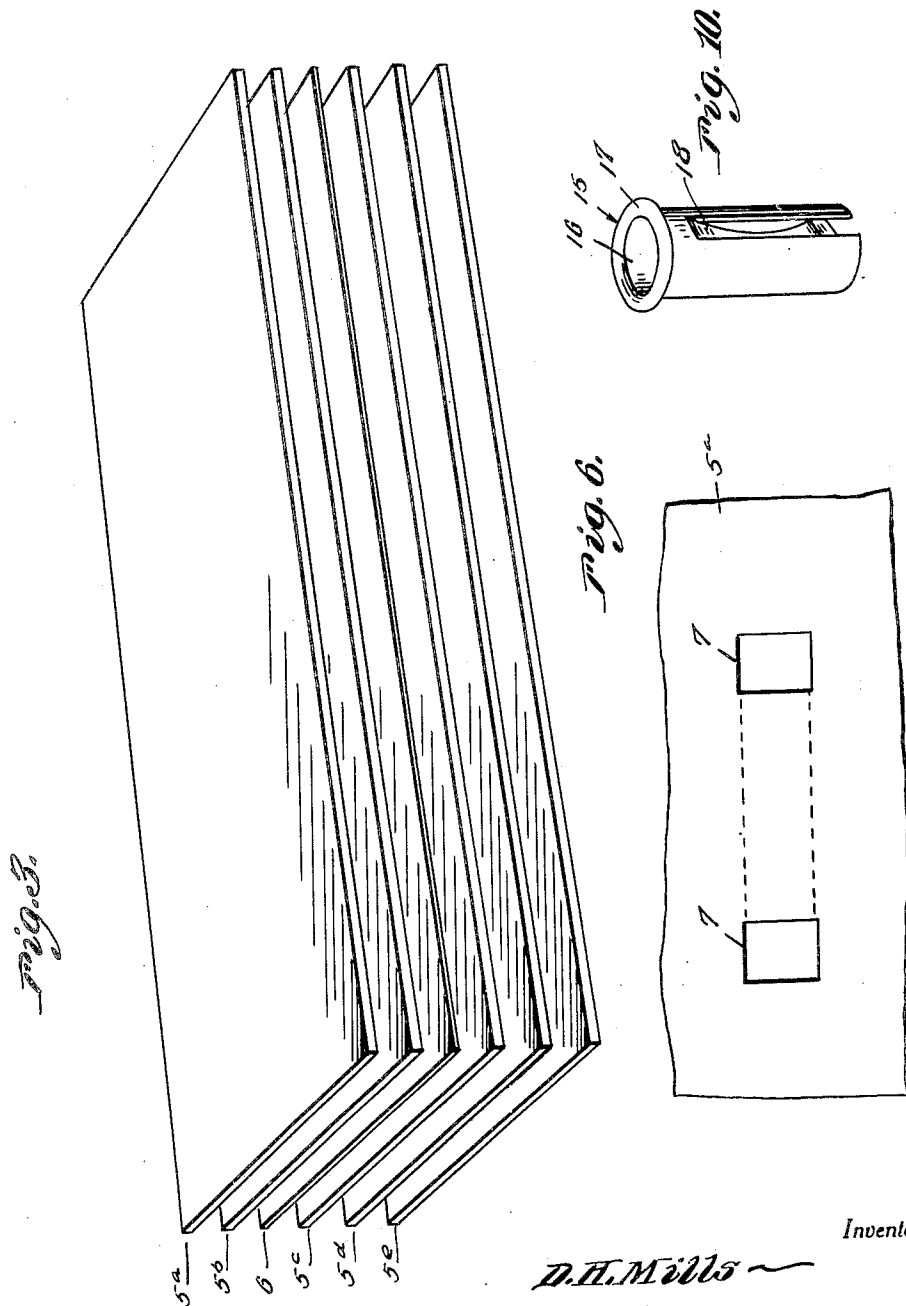
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1,939,130

RADIO BASE CONSTRUCTION

Filed April 14, 1931

3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

1,939,130

RADIO BASE CONSTRUCTION

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Application April 14, 1931. Serial No. 530,123

2 Claims. (Cl. 250—16)

This invention appertains to new and useful improvements in radio apparatus, and more particularly to a novel base construction built up in layers between which conductors may be placed for connecting the various instruments supported upon the base.

The principal object of the invention is to provide a base construction of the character stated wherein the parts can be cut out and the base construction completely assembled by machines.

Another important object of the invention is to provide a base construction wherein all of the connections between the electrical devices will be permanently protected against atmospheric conditions, as well as wear and tear occasioned by vibration.

These and other objects of importance, and advantages of the invention will readily become apparent to the reader as the invention proceeds by description hereinafter.

In the drawings:—

Figure 1 represents a top plan view of the novel base construction.

Fig. 2 represents an edge elevation of the novel base construction.

Fig. 3 represents a perspective view showing the various laminations separated.

Fig. 4 is a longitudinal sectional view through the construction, showing lugs disposed through the base and connected in the novel section.

Fig. 5 represents a fragmentary sectional view through the base construction showing the openings thereto and the connector ends for connecting the lugs shown in Fig. 4.

Fig. 6 is a fragmentary top plan view of the base enlarged to disclose openings therein for receiving the lugs shown in Fig. 4.

Fig. 7 represents a fragmentary sectional view through the lugs contacting with a connector modified from that shown in Fig. 4.

Fig. 8 represents a fragmentary sectional view disclosing one of the socket elements for the vacuum tube.

Fig. 9 represents a fragmentary sectional view through one of the sockets shown in Fig. 8 and taken on a plane between certain of the laminations.

Fig. 10 presents a perspective view of one of the socket elements such as is shown in Fig. 8.

Referring to the drawings wherein like numerals designate like parts, it can be seen that numeral 5 generally refers to the novel base construction which is built up of laminations 5a, 5b, 5c, 5d, and 5e. As is clearly shown in Fig. 3, upper plate 6 is interposed between the lamina-

tion 5b and the lamination 5c, this plate serving as a common ground. This ground plate 6 is cemented between its adjacent laminations 5b and 5c.

The base construction is provided with openings 7 extending vertically therethrough for receiving lug members denoted by numeral 8. The aforementioned laminations 5a, 5b, 5c, 5d and 5e are of some suitable fiber or insulating material and between certain of these laminations, straps 9 of some conductive material are disposed, in such a way that their ends project into selected ones of the aforementioned openings 7 in the manner shown in Fig. 5.

The portion of these straps 9 between the laminations is corrugated in the manner shown in Figs. 4 and 5. When the lugs 8 are pressed through the openings 7, they bend the end portions of the straps 9 downwardly in the manner shown in Fig. 4.

When the lugs 8 have been properly disposed into the opening 7, their lower ends are bent laterally as at 10 and the adjacent ends of the strap 9 are soldered, welded or otherwise secured thereto.

At predetermined places on the common ground plate 6, cut-out portions 11 serve to provide tongues 12, so that when the ground lugs 13 are extended downwardly through corresponding openings in the base construction, the tongues 12 will be bent downwardly.

After this disposition of the tongue and lugs takes place, the lower ends of the lugs are bent laterally as at 14, to clinch the free end of the tongue 12 against the bottom side of the lamination 5e and of course the lug can be soldered, welded or otherwise secured at this point to the tongue.

Socket constructions such as designated by numeral 15 in Fig. 8 are provided to receive the base prongs of conventional vacuum tubes. This socket construction comprises a tube 16 flanged at one end as at 17 and adapted for disposition thru pre-formed openings in the base construction. One of these sockets 15 is provided to receive each of the different prongs of the vacuum tube base as is clearly shown in Figs. 2 and 8. Each of these sockets is threaded inwardly from one end to provide a spring contact 18, disposed inwardly for frictional engagement with the prong of the vacuum tube.

When the tube 16 is being disposed through its opening in the base construction, the tongue 19 of the plate 6 will be bent downwardly so as

to project through the bottom of the base construction in the manner shown in Fig. 8.

It is, of course, understood that this invention may be adapted to different types of apparatus employing electron discharge devices of different conventional designs. Different apparatus often requires different connections between the prongs of the vacuum tubes as well as different types of vacuum tubes. Generally it is convenient to connect one of the electrodes of each vacuum tube of the radio set to the plate 6, however, when this plate is maintained at or near ground potential it may be desired to connect a lower potential electrode, such as, the filament or cathode, of a power amplifying tube to it through a suitable resistance.

After the tube has been properly disposed through the base it is flanged outwardly as at 20 and in this operation, the free end of the tongue 19 is snugly bent against the bottom side of the lamination 5c. The tongue 19 may be secured to the lower end of the tube 16 by soldering, welding, or any other means or methods found suitable.

It can thus be seen that all of the aforementioned constructions can be produced by machine operations, without the necessity of manual assembling.

While the foregoing specification really sets

forth the invention in specific terms, it is to be understood that numerous changes in the shape, size, materials may be resorted to without departing from the spirit or scope of the invention as claimed hereinafter.

Having thus described my invention, what I claim as new is:—

1. A panel construction of the character described comprising a plurality of laminations of insulating material, conductors disposed between the laminations, said laminations having registering openings therein and a socket member for snug disposition into each group of registering openings and to which one of the conductors is connected, and a connector engageable spring in the socket.

2. A panel construction of the character described comprising a plurality of laminations of insulating material in superimposed relation, conductors disposed between the laminations, said registering openings being divided into groups, a socket structure for disposition into each group of openings, each socket structure comprising a tubular body having its ends flanged and being provided with a pair of slits defining a spring tongue for projection into the socket structure, the said conductors being connected to corresponding socket structures.

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