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P. R. DIJKSTERHUIS
RADIO RECEIVING APPARATUS

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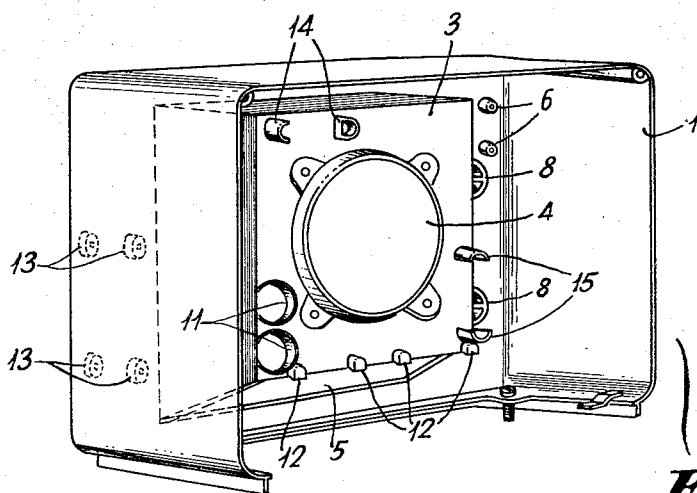


Fig. 1

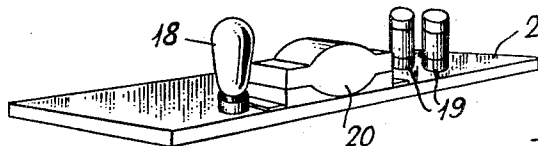


Fig. 2

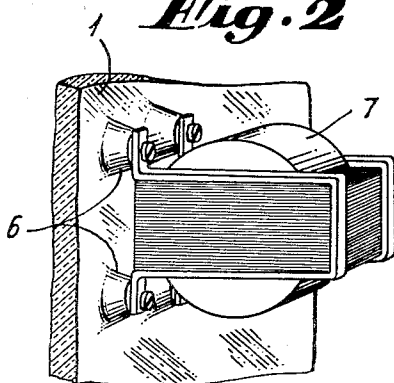


Fig. 3

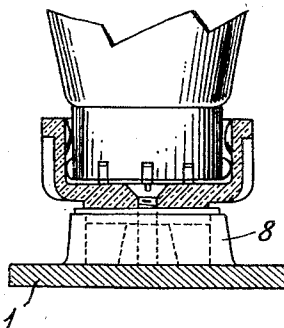


Fig. 4

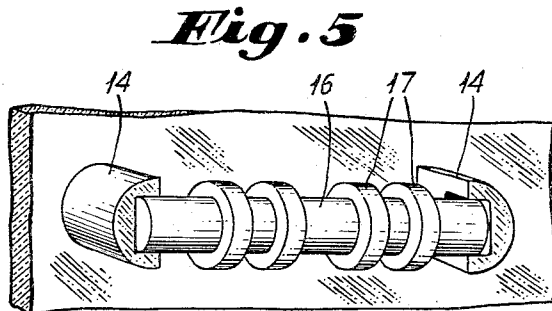
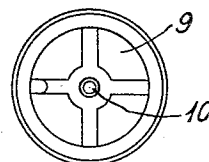


Fig. 5



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RADIO RECEIVING APPARATUS

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1 Claim. (Cl. 250—16)

The invention relates to radio receiving apparatus in which the casing is substantially constituted by a moulded part, as for example, "Bakelite". The object of the invention is to provide a novel method of mounting the components of such an apparatus, which method is cheap and particularly suitable for mass-production.

In the manufacture of radio receiving apparatus it has hitherto been customary to assemble the majority of the components such as condensers, valve sockets, coils, etc., on and partly in a particular metallic support to form a unit, the so-called "frame", and to mount this frame in the casing, preferably on the bottom thereof, the support being destined in this case at the same time for the electrical screening of the components. It is true that for particular reasons many components have frequently been mounted in the casing so as to be separated from the frame but this gave rise to constructional complications, more particularly with casings of moulded material, so that endeavors were made to assemble on the frame as many components as possible.

The invention consists in that with a receiving apparatus comprising a casing which is substantially constituted by a moulded part, the inner surface of this part is provided with projections to which the majority of the components of the apparatus are secured. The projections are moulded together with the moulded part in a single operation. They may be provided at any point desired so that the spatial distribution of the components over the interior space of the apparatus may be chosen as favorable as possible and the components are easy of access; care should of course be taken to ensure an easy removal of the aggregate from the mould.

According to the invention, there is secured inter alia the advantage that the space available within the casing can be utilized more efficiently. The inconvenience of a greater compaction of the casing is of no importance for mass-production; the mounting of the components is greatly facilitated so that the apparatus according to the invention can be manufactured, as has been found in a considerably cheaper manner than apparatus equipped with a frame.

One form of construction of an apparatus according to the invention is represented, by way of example, in Fig. 1 which shows an elevation in perspective in which for the sake of clearness most components are omitted. Figs. 2-5 show the manner of mounting the separate components.

Fig. 1 shows the moulded part which substantially constitutes the casing. The rear-side of

the casing is entirely open and may be closed after the mounting of the components. The bottom of the casing consists of a piece of material 2, for example of wood, which may be secured to the moulded part by means of screws or the like, said bottom being shown in the figure separated from the moulded part. The bottom may also be made integral with the remainder of the casing, if desired, but a removable bottom affords the advantage that the interior of the casing is more easily accessible and that consequently the mounting of the components is facilitated. The moulded part has a portion 3 which projects within the casing and which has an opening 4 destined for the mounting of a loudspeaker. The aperture 5 serves to provide a scale which is not shown in the drawing.

The components are secured to the rear-side of the front wall of the casing. For this purpose the moulded part has a plurality of projections which are formed so as to render possible an extremely easy mounting of the components. For example, the projections 6 may serve for the mounting of a transformer, e. g. the output transformer. Subsequent to the moulding of the casing they are provided to that end with a screw thread. Another possibility consists in pressing-in threaded metallic parts. Fig. 2 shows the mounting of a transformer 7.

As is shown in Fig. 3, projections 8 are intended for the mounting of valve sockets. As is shown in Fig. 4 in plan view, they have an annular shape and are provided with two raised parts which extend diametrically within the ring. The socket may be attached in a bore 10 by means of a screw. For the mounting of the high-frequency coils there are provided annular projections 11 into which fit the coils which generally have a cylindrical shape. Owing to their slight weight, they may simply be clamped in the projections and/or be attached to the casing with the aid of cement, screws being not necessary.

The parts 12 may serve, for example, to mount part of the scale or indicator device, for example, the guide of the pointer. On the parts 13 is mounted a support which carries, for example, the tuning condensers and the wave-length switch. With this mutual arrangement it is easily possible to bring about the mechanical coupling between the variable condensers and the pointer of the scale.

Projections of particular shape are provided for the purpose of mounting the intermediate-frequency transformers. These transformers are constituted by a cylindrical support 16 (Fig. 5)

whose diameter is comparatively small with respect to its length on which the coils 17 are provided. The cylindrical supports are slid between the projections 14 and 15 respectively, which are provided for this purpose with recesses serving to guide the ends of the cylinders. They are clamped in these recesses and/or may be attached with the aid of cement. These two transformers are mounted perpendicularly to one another in order to prevent them from reacting on one another.

As may be seen from Fig. 1, that part which serves to supply the apparatus is mounted on the removable bottom 2 of the casing. 20 denotes a supply transformer, 18 a vacuum tube rectifier, and 19 filter condensers. The supply transformer is mounted as remote as possible from the output transformer.

It has been found that a particular screening of the separate components relatively to one another is not necessary since with the arrangement described it is always possible to choose the mutual distances so large that they exert no noticeable influence on one another. The arrangement of the loudspeaker on a part of the casing which

projects inwardly also has a favorable effect in this respect because its metallic masses have a screening effect. Parts which may have an electrical effect on one another should therefore preferably be mounted on different sides of the loudspeaker as is also the case in the above-described example of construction.

What I claim is:

A casing construction for a radio receiver provided with a loudspeaker and other component parts, said casing being made of moulded insulating material and comprising a front wall, top and side walls integral therewith, a partition of moulded insulating material disposed rearwardly of and parallel with the front wall, connecting members between said partition and front wall integrally formed therewith, an aperture in said partition for accommodating the loudspeaker, and means formed integral with the front wall and with the partition whereby the component parts of the receiver, such as the transformers and tube sockets, are capable of being supported thereon.

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