Oct. 25, 1949. J. A. VAN LAMMEREN 2,486,230

RADIO RECEIVER APPARATUS

Filed Feb. 12, 1947

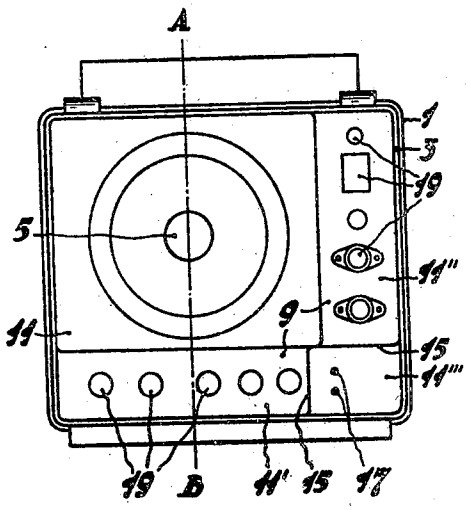

Fig. 1a.

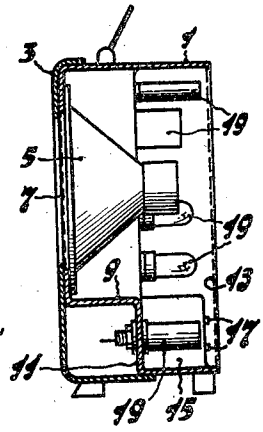

Fig. 1b.

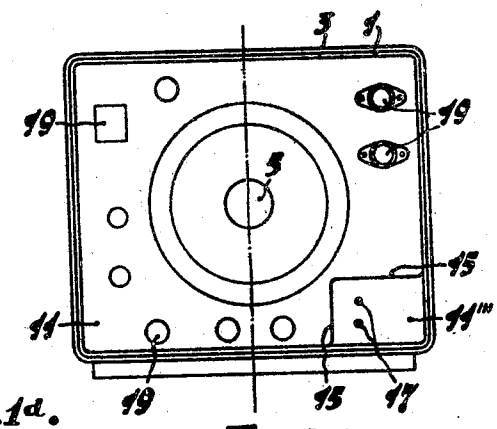

Fig. 2a.

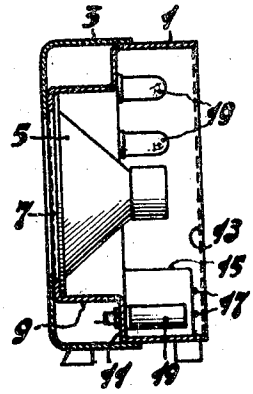

Fig. 2b.

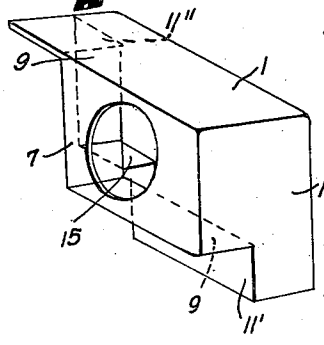

Fig. 1d.

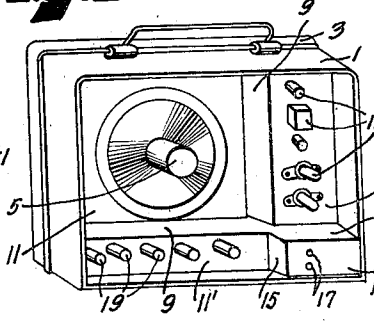

Fig. 1c.

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RADIO RECEIVER APPARATUS

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3 Claims. (Cl. 250—16)

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This invention relates to an electric device and more particularly to a wireless receiver constituted by a cabinet of moulded material in which a supporting wall carries a loudspeaker and an amplifier for electric oscillations. It relates, in addition, to a cabinet for such a device.

In a wireless receiver of the above-mentioned kind which was previously put on the market, the loudspeaker, as well as the largest portion of the receiver proper (amplifier), were mounted on the front plate. The parts of the amplifier and the wiring were provided in this case on the same side of the front plate; that is, on the back of the said front plate. This form of construction has the drawback of taking up comparatively much space, since the parts and the wiring must be provided side by side. A second drawback is that the parts, of which a great many thereof, for example, sockets, electrolytic condensers, etc., are most suitably mounted in a hole of a wall, cannot be mounted in this manner.

According to the invention, these drawbacks are obviated by having the parts of the amplifier and the wiring provided on each side of the said supporting wall, which wall constitutes, together with the cabinet, one moulding piece. Further, the supporting wall is substantially normal to the axis of the loudspeaker and is located behind the movable front plate adjoining the loudspeaker. In this case the supporting wall may be provided without any objection with holes in which the parts of the amplifier can be mounted in the normal manner. The parts and the wiring are divided over the two sides of the supporting wall, owing to which the latter may have smaller dimensions than in the form of construction of the existing type, in which the wiring and the parts are provided on the same side of a supporting wall. In the device according to the invention the wiring is preferably provided on the front of the supporting wall and is in this case easily accessible after the front plate has been removed.

Since the loudspeaker is carried by the supporting wall, the loudspeaker keeps in position on removing the front plate and this facilitates the mounting and the wiring of the loudspeaker. A second advantage is that the front plate which need not carry the loudspeaker, may be of a light and cheap construction. In order to have easy access to the wiring of the amplifier, the parts of the latter are preferably mounted outside the projection of the loudspeaker on the

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supporting wall. The loudspeaker may be mounted on a plate of moulded material which is connected to the supporting wall by means of wall pieces which are parallel with the axis of the loudspeaker and which have also been moulded. The whole of the carrier construction constitutes in this case one moulded piece with the cabinet. If desired, several parts may be mounted on the said wall pieces.

It is advantageous to realize the supporting wall in such manner that a projecting portion thereof is located at a short distance from the back of the cabinet and carries the terminal contacts, for example, the terminals for the connection of the aerial and earth, pick up device, etc. The corresponding plugs may be introduced into the terminals in the normal manner, for example through a cardboard back wall.

The invention will be explained more fully by reference to the accompanying drawing showing, by way of examples, a few embodiments thereof.

Figure 1*a* is a back view of a wireless receiver according to one embodiment of the invention. The back wall is removed to permit a view of the arrangement of parts on the inside.

Figure 1*b* is a sectional view of the receiver shown in Figure 1*a* taken along the section line A—B but with the loudspeaker shown isometrically.

Figure 1c is a perspective view of the back of the receiver shown in Figure 1*a* to more clearly show the arrangement of parts.

Figure 1*d* is a front perspective view of the unitary element support and cabinet portion shown detached from any other elements to more clearly show the relationship between the front plate portion and the attached portions.

Figure 2*a* is a back view of a wireless receiver according to another embodiment of the invention with the back wall again removed.

Figure 2*b* is a sectional view of the receiver shown in Figure 2*a* taken along the section line C—D but with the loudspeaker shown isometrically.

The embodiment of the invention shown in Figures 1*a*, 1*b*, 1*c* and 1*d* will now be described. As illustrated therein, a wireless receiver comprises a cabinet 1 of moulded material having a removable front plate 3. The loudspeaker 5 of the receiver, whose front adjoins the front plate 3, is secured to and is carried by a plate 7 which adjoins the walls of the cabinet 1 along two of its four edges and which is connected along the other two edges to the supporting

wall 11, which is normal to the axis of the loudspeaker 5, by means of wall pieces 9 which are parallel to the axis of the loudspeaker. The supporting wall is constituted by two strip-shaped portions 11' and 11'' and a projecting portion 11''', which is located at a short distance from the back of the cabinet, the said back of the cabinet may be of cardboard, for example. In the case shown, the portions 11', 11'' and 11''' of the supporting wall 11 are located in the space which exists between the loudspeaker 5 on the one hand and the upper and lower walls and the sides of the cabinet 1 on the other hand and constitute one moulding piece with the cabinet and with the plate 7. The portion 11''' of the wall is connected to the other portions 11' and 11'' by means of wall pieces 15 which are parallel to the axis of the loudspeaker 5 and carries terminal contacts 17 which serve, for example, for the connection of the aerial and of the earth wire. Suitable plugs (not shown) may be passed through apertures (not shown) in a cardboard back-wall 13.

The parts 19 of the amplifier are mounted on the back of the supporting wall 11', 11''. On its front is provided a wiring which is accessible after removing the front plate 3. The construction described offers the advantage that the manufacture and mounting of a separate chassis is not required. The supporting wall which serves as the chassis, constitutes one moulding piece with the cabinet whereby nevertheless the advantages of the chassis structure, viz. easy mounting (the mounting holes may be pressed into the supporting wall 11) and saving in space are fully utilised, since both sides of the carrier wall are used.

After the front plate 3 has been removed, the wiring is very well accessible if in the manner shown in Figure 1*b* the front plate 3 constitutes the bottom of a container of which one or more edges adjoin the corresponding outer edges of the supporting wall.

In the form of construction shown in Figures 1*a*, 1*b*, 1*c* and 1*d* the front plate 3 constitutes the separation between the front and the back of the loudspeaker. Such separation is necessary for a satisfactory reproduction of the low tones and must adjoin the wall of the loudspeaker 5 in a soundproof manner. In this case it is not necessary for the supporting wall to be soundproof.

Figures 2*a* and 2*b* show a form of construction of the receiver according to the invention, which is substantially identical with that shown in Figures 1*a* and 1*b* but in which the construction of the supporting wall is soundproof. The wall piece 9 by which the loudspeaker 5 is connected to the supporting wall 11 has in this case a cylindrical shape and constitutes, together with the supporting wall 11, the required acoustic separation between the front and the back of the loudspeaker 5. A satisfactory reproduction of the low tones is thus ensured even without the cooperation of the front plate 3. The latter may consequently consist almost completely of cloth and may thus be light and inexpensive.

What I claim is:

1. A radio receiving apparatus comprising a supporting panel having a front surface and a rear surface, wall portions extending rearwardly from said panel to form a cabinet structure therewith for said radio receiving apparatus, said supporting panel and said extending wall portions being of an integral moulded material, said panel having a portion thereof in a plane rearwardly displaced from and parallel to the plane of the remaining portion of said panel, an amplifier unit mounted on said rear surface of said rearwardly displaced panel portion, wiring mounted on said front surface of said rearwardly displaced panel portion, said remaining portion of said panel having an opening therethrough, a loudspeaker supported on said remaining portion of said panel with the magnetic unit thereof located within said cabinet structure, said loudspeaker being aligned with the opening in said panel for projecting sounds through said opening to the region at the front of said panel, and a removable front plate mounted on said cabinet structure and facing said front surface of said supporting panel for covering said wiring on said front surface.

2. A radio receiving apparatus as claimed in claim 1 wherein said removable front plate has an opening therein which aligns with the opening in said panel when said front plate is mounted on said cabinet structure.

3. A radio receiving apparatus comprising a supporting panel having a front surface and a rear surface, wall portions extending rearwardly from said panel to form a cabinet structure therewith for said radio receiving apparatus, said supporting panel and said extending wall portions being of an integral moulded material, said panel having a portion thereof in a plane rearwardly displaced from and parallel to the plane of the remaining portion of said panel, an amplifier unit mounted on said rear surface of said rearwardly displaced panel portion, wiring mounted on said front surface of said rearwardly displaced panel portion, said remaining portion of said panel having an opening therethrough, a loudspeaker supported on said remaining portion of said panel with the magnetic unit thereof located within said cabinet structure, said loudspeaker being aligned with the opening in said panel for projecting sounds through said opening to the region at the front of said panel, a removable front plate mounted on said cabinet structure and facing said front surface of said supporting panel for enclosing said wiring on said front surface, and a removable back plate mounted on said cabinet structure and facing said rear surface of said supporting panel for enclosing said amplifier unit and loudspeaker.

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