April 9, 1935. M. PONTE 1,997,075

RADIOTRANSMITTER

Filed March 29, 1933

Fig. 1

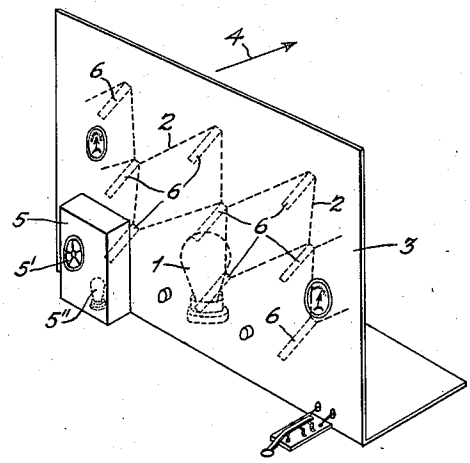
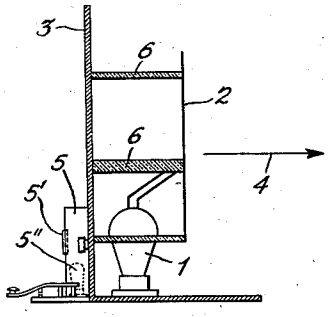


Fig. 2



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RADIOTRANSMITTER

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Application March 29, 1933, Serial No. 663,391
In France March 31, 1932

3 Claims. (Cl. 250—17)

The present invention relates to an improved system for short wave radio transmitters. It relates to an improvement for a simplification of mounting which enables one to obtain excellent results by an increase in radiation without increasing the over-all dimensions of the apparatus.

To this end the antenna or the group antennæ is placed before a metallic plate having a plane surface. The plate also serves as a board for the mounting of the various parts of the set, thus obtaining a compact construction of least space.

The invention will be more readily understood with reference to the Figures 1 and 2 representing an embodiment of the invention by way of example but is not limited to this particular construction.

Figure 1 shows a perspective view of the set as obtained in accordance with the present invention.

Figure 2 shows a cross-section thereof.

The figures represent a short wave transmitter equipped according to the present invention. The oscillator 1 operates upon the antenna 2 which may be of any chosen type and which in this particular arrangement is shown as being of a directive type as presented by the zig-zag antenna. The metallic panel mounting plate 3 is situated in front of the antenna viewing in the direction of emission indicated as at 4 and is arranged at such a distance from the antenna as will allow an increase of the emission in the direction 4 up to a maximum value, i. e., one-quarter of a wave length. According to the invention the plate 3 also serves as mounting board for the entire transmitter and as such carries at one side the antenna fitted on insulating supports 6, 6 while on the other side all the measuring apparatus and the apparatus for manipulation or modulation, a modulator 5 comprising a microphone 5' and modulator tube 5'' and a key 7 are provided (both schematically represented in Figs. 1 and 2). The oscillator as such is represented as at 1, and is provided with the known means for diminishing the effect of its direct radiation, thus plate 3 may also serve as a screen, and then the oscillator is mounted on the other side of the plate in respect to the side for the antenna.

Owing to the shortness of the waves (for instance, below one meter but not limited to this value) for which this apparatus is designed, it is possible to obtain small sets which can easily be set for directing the antenna in a given direction.

As a novel industrial product the invention is particularly applicable to magnetron oscillators which allow to obtain relatively large energies for waves of the order of 30 cenitmeters with the antennæ of the type represented. The invention may likewise be utilized for other transmitters such as the Barkhausen transmitter.

What I claim is:

1. A short wave transmitter comprising a metallic plate having a plane surface, an oscillator mounted thereon and in fixed relation thereto, a directional antenna mounted on said plate spaced one-quarter of a wave length from said plate.

2. A short wave radio transmitter comprising a metallic plate having a plane surface, an oscillator mounted on said plate, an antenna insulatingly mounted on the rear of said plate one-quarter of a wave length away from said plate, and modulating apparatus comprising a microphone, a modulating tube and a key mounted on said plate on a side opposite said antenna.

3. A short wave radio transmitter having the component parts of apparatus and a directional antenna mounted on a metallic plate having a plane surface which acts as a reflector for reinforcing the action of the antenna in a given direction.

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