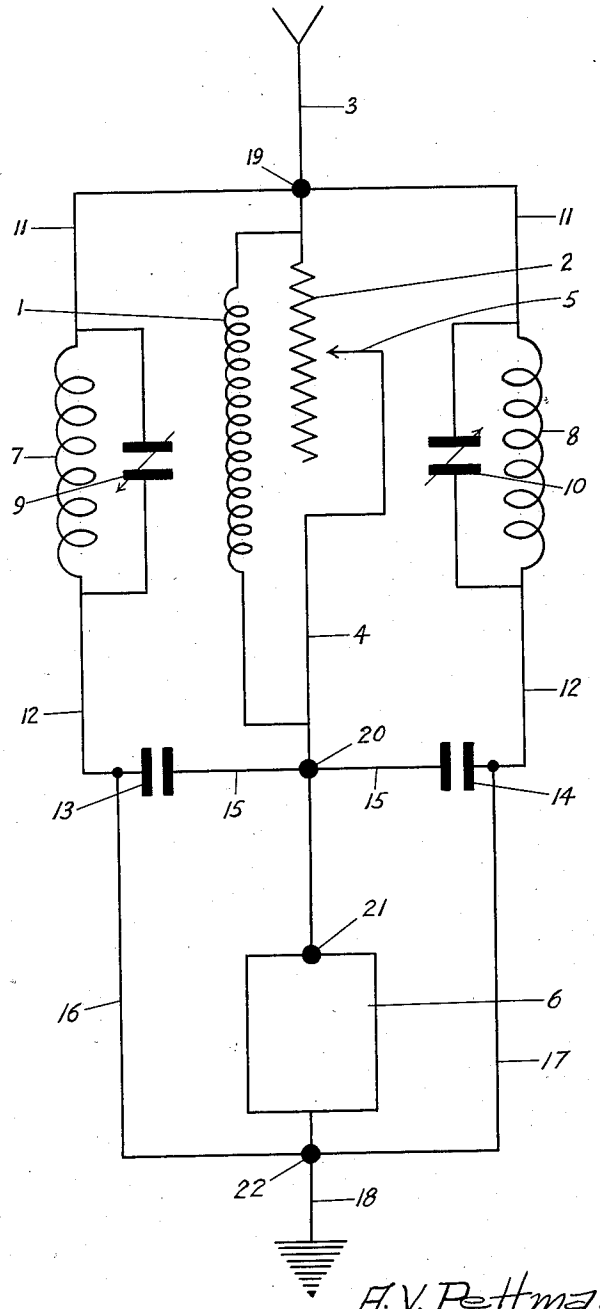
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WIRELESS APPARATUS

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WIRELESS APPARATUS

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3 Claims. (Cl. 250—20)

This invention relates to wireless apparatus, the object being to eliminate or prevent the unwanted frequencies, such as static and the like, thus avoiding the usual noises in receivers.

According to the present invention, the unwanted frequencies are prevented from reaching the receiving set by means of a variable resistance parallel with a high inductance and passed directly to earth by two inductances in parallel, which are tuned by either variable or preferably fixed condensers to the same wave length or frequency as each other. One end of each of the said tuned inductances is electrically connected to the high inductance and the other ends are joined to earth and by means of fixed condensers to one end of the high inductance which is governed by the variable resistance.

The wanted signals or waves pass to the high inductance which is connected to the receiving set.

The invention will be described with the aid of the accompanying drawing which illustrates by means of a conventional diagram the invention.

Referring to this diagram, a high inductance 1 is associated with a variable resistance 2 of usual type, each being connected by wiring 3 to the aerial, while the other end of the inductance 1 is connected to the wire 4 which leads from the variable portion 5 of the resistance to the receiving set 6. Outside the inductance 1 are two inductances 7 and 8, each adapted to be tuned to absolutely the same wave length or frequency as each other by means of variable or preferably fixed condensers 9 and 10 and each having one side thereof electrically connected to the high inductance 1 by the wires 11 while their other sides have wires 12 which are respectively joined to fixed condensers 13 and 14 from which lead wires 15 connected to wire 4 from the resistance 2. Other lines 16 and 17 connect the lines 12 to the earth lead 18 of the set.

In operation, the unwanted frequencies, such as static and the like, are checked by the variable resistance 2 and will be prevented from reaching the receiving set 6 but are conducted to earth through the tuned inductances 7 and 8. The wanted signals or waves will pass to the high inductance 1 and to the receiving set 6. The two inductances 7 and 8 are tuned by the constant or variable condensers just off the desired station, such as a local station, or any definite wave length and must be of exactly the same frequency.

The two condensers 13 and 14 are necessary in that without them loss of signal strength will be noticed.

Only three terminals are used for connecting to the receiving set aerial and earth. One being at the point 19 at which the high inductance 1 and the two tuned inductances 7 and 8, and also the variable resistance 2 are joined together this going to the aerial proper. Another terminal will exist at the point 20 where the two fixed condensers 13 and 14 are joined together also to the other side of the high inductance 1 and the variable resistance 2. This point is a lead to the aerial terminal 21 of the receiving set 6.

Another terminal 22 is where the two tuned inductances 7 and 8 are joined together at the other side of the fixed condensers 13 and 14 together with the two inductances 7 and 8 and the variable condensers 9 and 10. This lead goes to the earth proper and the earth lead on the set 6.

The coils 7 and 8 when tuned to similar frequencies cancel each other out more or less, according to the degree they are tuned by the condensers 9 and 10. The whole of the frequencies, both wanted and unwanted, come first from the aerial through the variable resistance direct to the set, which has been adjusted to its most sensitive condition; then the variable resistance is adjusted to enable the wanted signals to flow to the set and force back the statics and other unwanted frequencies. These frequencies follow the easiest way to earth and as the high inductance 1 chokes them from that route, they go by the wires 11 to the low inductances 7 and 8, where they are cancelled out and so to the earth as described. Condensers 13 and 14 are so arranged to bypass all stray frequencies, by tuning the primary coil in the receiving set.

What we claim is:—

1. In wireless apparatus, a receiving set, an aerial, a high inductance, a variable resistance associated therewith, each connected to the aerial at the signal incoming end, their other ends connected to the receiving set, tuned inductances connected to the incoming ends of the inductance and resistance and their other ends connected to the earth terminal of the receiving set.

2. In wireless apparatus, a receiving set, an aerial, a high inductance connected to the aerial, a variable resistance also connected to the aerial at the same point as the inductance, the point of variance of the resistance connected to the receiving set, the other end of the inductance connected to the lead from the resistance to the set, tuned inductances connected at one end to the aerial at the point to which the high inductance and resistance is connected, the other end of said tuned inductances connected to the earth lead from the set, said tuned inductances having condensers whereby they may be tuned to exactly the same wave length as each other.

3. In the apparatus as claimed in claim 2, the terminal between the inductances and the earth lead of the set being connected to the lead from the high inductance and the resistance with fixed condensers therein.

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