April 15, 1930. A. LEIB 1,754,326

ARRANGEMENT FOR WIRELESS TELEGRAPHY AND TELEPHONY

Filed March 26, 1923

Fig. 1

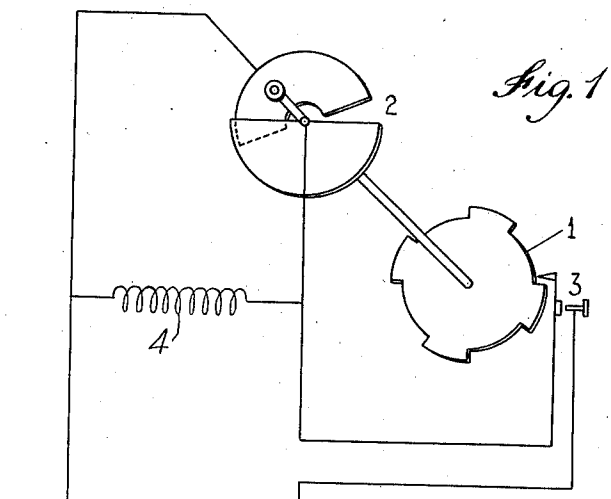
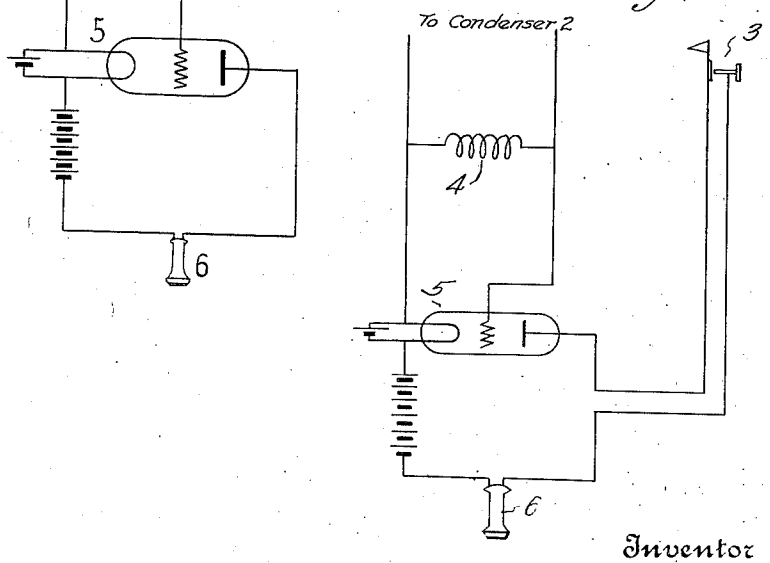


Fig. 2



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REISSUED

UNITED STATES PATENT OFFICE

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ARRANGEMENT FOR WIRELESS TELEGRAPHY AND TELEPHONY

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The present invention relates to an arrangement for wireless telegraphy and telephony and is particularly intended for use in receivers in which a device, which operates in synchronism with the varying tuning means, is employed to render the indicator such as a detector, an amplifier, a telephone, etc., ineffective for certain points or parts of a wave band. Due to this arrangement at certain selectable points of the band of wave lengths to which the receiver may be tuned by the tuning means, receiving is made impossible, and therefore these bands or ranges may be barred from, e. g., unauthorized radio receiving. This may be attained by a switch device which is mechanically connected with the variable condenser or variometer of a tuned circuit of the receiver. By this device the detector, the telephone receiver or the amplifier circuits may be temporarily disconnected or short circuited so as to prevent reception.

Fig. 1 of the drawings schematically illustrates one embodiment of my invention and Fig. 2 is a modified form showing a connection to interrupt the anode circuit of the tube. The parts not shown in Fig. 2 are similar to those of Fig. 1 and the connections likewise similar.

As shown, a disc 1 having a toothed periphery is fixed on the shaft of the variable condenser 2 of an oscillating circuit in a receiver. This disc cooperates with a contact device 3 and causes the opening and closing of this contact when during the rotation of the disc the contact engages depressed and raised portions respectively of its toothed periphery. The tuned circuit is completed by the self induction 4, and its tuning will continuously pass through the wave band of the receiver while the condenser 2 is being rotated. An indicator such, for example, as an audion 5 with a telephone receiver 6 is connected with the oscillating circuit of the receiver. The contact device 3 is in the conductor leading from the tuned circuit to the audion and will interrupt this connection while the movable member of contact device 3 rests in a notch of the disc 1. For this reason, receiving is prevented over a corresponding portion of the wave band. Obviously, the interruption may be effected in another part of the circuit arrangement of the receiver e. g. in the anode circuit of the tube, the heating circuit, etc.

The arrangement shown in Figure 2 is similar to the arrangement shown in Figure 1 except that in Figure 2 the anode circuit is interrupted by the contact device 1 and 3.

The invention is particularly intended for use in receiving apparatus in which the condenser 2 is continuously operated to repeatedly vary the tuning of the receiver over a band of wave lengths.

Having described my invention, what I claim is:

1. In a high frequency receiving system, a resonant circuit, means for varying the tuning of the circuit, a second circuit, and means operated by said tuning varying means for breaking said second circuit to prevent reception at certain wave lengths.

2. In a high frequency receiving system, receiving means, a signal responsive device, and means for continually and periodically placing said signal responsive device into and out of operative relation with said receiving means at predetermined separated values of the incoming signal wave lengths.

3. In a high frequency receiving system, a resonance circuit, means for continuously and periodically varying the tuning of said circuit through a band of wave lengths, and means for preventing reception at predetermined separated wavelengths of the band.

4. In a high frequency receiving system, a resonance circuit, means for continuously and repeatedly varying the tuning of said circuit through a band of wave lengths, and means operated by said first means for preventing reception at predetermined separated wave-lengths of the band to which said receiving system is responsive.

5. In a high frequency receiving system, a resonance circuit, means for continuously and repeatedly varying the tuning of the circuit, and means operated by said tuning varying means for preventing reception at certain predetermined separated wavelengths in the signal band to which said receiving system is responsive.

6. In a high frequency receiving system,

a resonance circuit, means for continuously and repeatedly varying the tuning of the circuit, a second circuit, and means operated by said tuning varying means for continuously and repeatedly breaking said second circuit to prevent reception at certain wavelengths.

7. In a high frequency receiving system, a circuit having a tuning device therein, a signal responsive device, circuit breaking means for controlling said signal responsive device, and rotating means for operating said tuning device and said circuit breaking means simultaneously continuously and repeatedly.

8. In a high frequency receiving system, a resonance circuit having a tuning device therein, an audion tube having input and output circuits, said input circuit being coupled to said resonance circuit, a circuit interrupter having contacts in one of said tube circuits, rotating means for controlling said tunning device and said circuit interrupter simultaneously, and a telephone in said output circuit.

9. In a high frequency receiving system, a resonance circuit including a condenser, means for controlling said condenser to vary the resonant frequency of said circuit, a second circuit, and means operated by said condenser-controlling means for making and breaking said second circuit to prevent reception at certain wavelengths.

10. In a receiving arrangement for wireless telegraphy and telephony, a resonant circuit, a continuously rotated condenser for continuously and repeatedly varying the tuning of the circuit through a band of wave lengths, a disc mounted on the shaft of the condenser and having a toothed periphery, and contacts controlled by said disc for breaking a circuit of the arrangement so as to prevent reception at certain of the wave lengths in said band.

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