

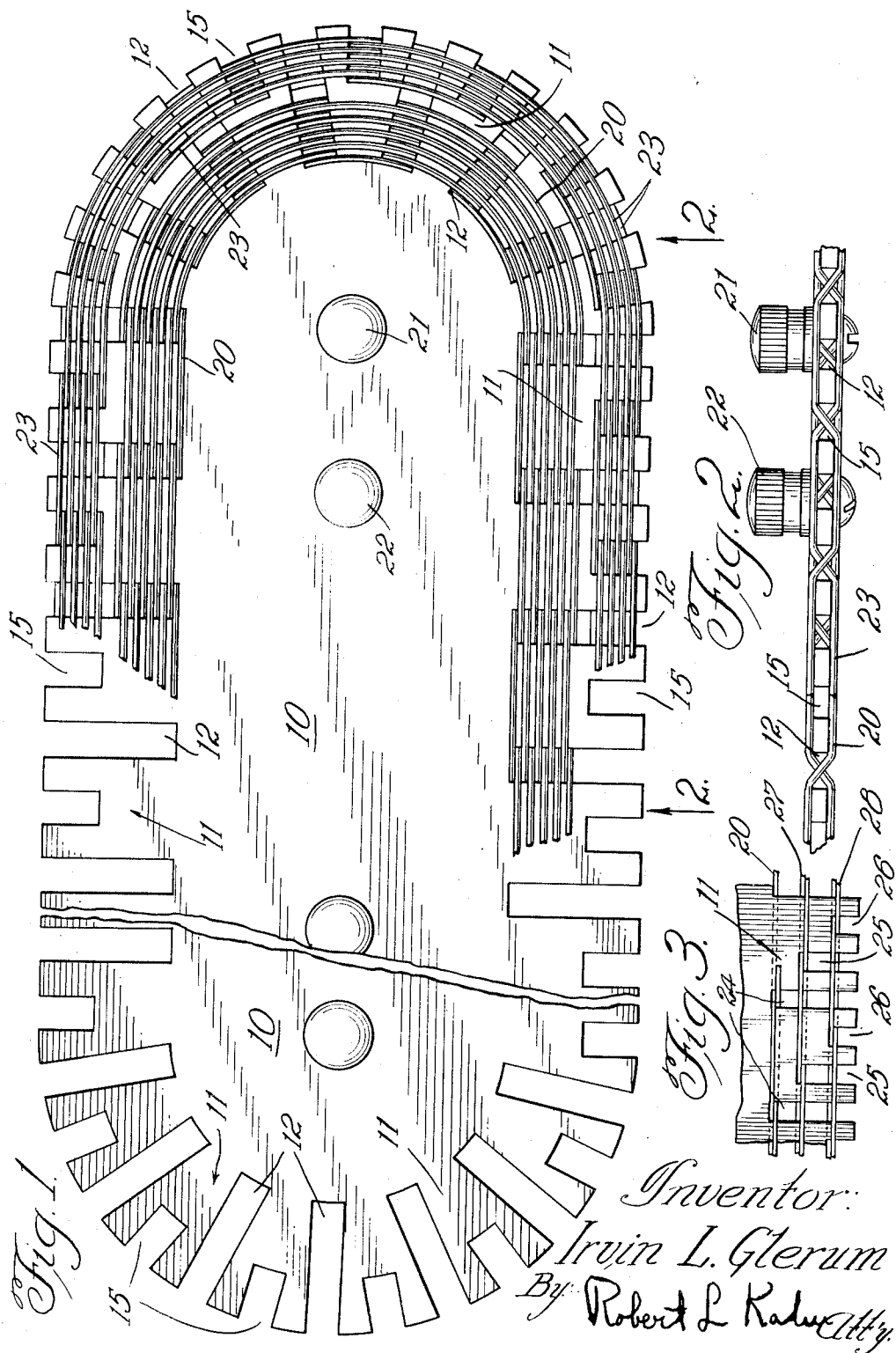
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COIL MOUNTING

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COIL MOUNTING

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3 Claims. (Cl. 175—359)

This invention relates to a coil mounting and particularly to a mounting for a loop antenna having two or more sets of windings.

In a multi-wave band receiver it is desirable to have different antenna characteristics for the different wave bands if efficient reception is to be obtained. This is particularly true of loop antennae.

If, for example, two wave bands are to be handled by loop antenna, it is necessary to have less inductance and capacity for the shorter wave band than for the longer wave band. This may be accomplished by cutting down on the number of turns of the shorter wave band loop. However, when the shorter wave band loop is being operated, it is necessary to prevent undesirable reaction from the longer wave band loop. Thus if the coupling (usually by capacitance) is sufficiently high, it is possible for the longer wave band loop to resonate at frequencies within the shorter wave band. This may reduce the efficiency of the shorter wave band loop to such a degree as to render it inoperative in normal receivers.

To avoid this, the longer wave band loop is sometimes short-circuited. This acts as a shorted secondary to absorb energy and due to the resistance, may not even suffice to prevent oscillations.

Hence the most effective solution is to have the two (or more) loop antennae with negligible interloop capacitance. This means a maximum of physical separation.

For the sake of economy and compactness, it is desirable to dispose loop antenna windings on a single supporting member while providing a minimum of capacitance between separate windings.

In accordance with this invention, I provide a simple member having a plurality of series of teeth upon which a plurality of antenna windings may be supported. Thus, one loop antenna winding may be supported on one series of teeth while another antenna winding may be supported on a different series of teeth, the support being effective to maintain the wires of one series separate from the other at any desired distance.

Referring to the drawing:

Figure 1 is a plan view of a device embodying the invention;

Fig. 2 is a view looking down along one portion of the device; and

Fig. 3 is a detail of a modification.

Referring to the drawing, a sheet of solid insulating material 10, preferably of cardboard,

fiber, Bakelite or any other material, is provided with a series of outwardly extending large tooth members 11 with intervening spaces 12 therebetween. Each tooth 11 extends outwardly from body 10 for any desired distance and may have a slot 15 in the tip thereof. A wire 20 may be snaked or threaded in and out of various intervening spaces 12 and on alternate sides of large teeth 11.

A plurality of turns of wire 20 around the complete body may be formed and in order to prevent the wire from laying on the same side of a tooth as the adjacent turn, it is preferred to have an odd number of teeth or to skip a tooth to stagger the turns on one side. As many turns may be provided as may be found necessary, the two ends of the wires being brought in to terminals 21 and 22 carried by the body 10.

A second wire 23 may be threaded in and out of slots 15, the bottom of the slot limiting the approach to the first winding.

In Fig. 3, the large teeth 11 are separated from each other by slots 24 and the teeth themselves have slots 25 and 26 of different depth. Thus in large slots 24, wire 20 may be disposed, while wires 27 and 28 may be disposed in slots 25 and 26 respectively.

By proper proportioning of the slots and teeth, it is possible to have the windings as far from or as close to each other as may be desired. Thus, coupling between two or more windings may be preferred in the event that an oscillator is to be provided. In that case, one winding might be in a grid circuit and the other in a plate circuit of a vacuum tube functioning as an oscillator.

What is claimed is:

1. A coil support comprising a flat supporting member having a closed series of large teeth extending outwardly in the plane of the body with intervening large slots, at least certain of said teeth having smaller teeth formed therein to form other series of teeth with other small slots, and a winding carried by each series of teeth, each winding having the wire thereof snaked through the large and small slots respectively.

2. A device for supporting coils comprising a flat insulating member having a closed series of teeth extending outwardly therefrom along the periphery thereof with intervening large slots, a winding with the wire thereof snaked through the slots and around each tooth at the base thereof, at least certain teeth having slots formed in the free end thereof to form an outer series of small teeth with other small slots and a sec-

ond winding snaked through said other small slots above and below the peripheral portion of said member.

3. A coil support comprising a flat insulating
5 member having a closed series of outwardly extending teeth and intervening large slots along the periphery thereof, at least certain teeth having a pair of smaller slots formed at the tip with
10 the slots of a pair having different depth to form two additional series of teeth and other series

of slots, the length of the teeth of one series being different from the remaining teeth, and three windings snaked through slots and around teeth, one winding always going through the large slots only, a second winding going through the smaller slots but not through the smallest slots, and a third winding going through the smallest slots to provide predetermined coupling and capacity. 5

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