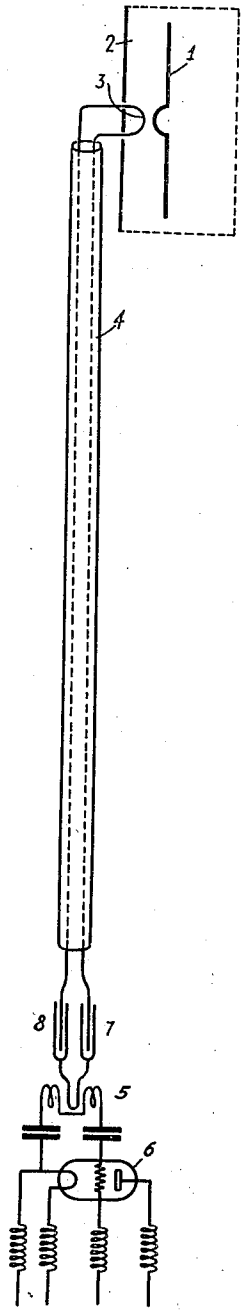
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MEANS FOR RECEIVING WAVES OF AN ORDER OF ONE METER AND ONE DECIMETER

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MEANS FOR RECEIVING WAVES OF AN ORDER OF ONE METER AND ONE DECIMETER

Application filed April 5, 1930, Serial No. 441,976, and in Germany April 25, 1929.

In my copending application Serial No. 441,971, filed April 5, 1930, a receiving arrangement for waves of an order of 1 meter or 1 decimeter has been disclosed which comprises a radio frequency collective receiver outfit favorably positioned with reference to the radiation field and from which the signal and communication frequencies obtained by demodulation are distributed to the various individual sets or consuming points.

The present invention facilitates or simplifies the construction and mounting of such a collective receiver in that the tube for demodulation and regeneration (reduction of damping) is not inserted directly in the receiver dipole (which is mostly located at relatively great height and is therefore difficulty accessible), but is connected therewith (or with a plurality of electrically associated directionally acting receiver dipoles optionally in combination with reflectors) by means of what is known as a radio frequency feed wire. In this manner the part of the apparatus comprising and working with tubes can be accommodated at a better protected and more readily accessible point of the installation so that the operation and replacement of the tube is made easier.

Since feed wires or lines of the kind here coming into consideration as well-known in the art of short-wave communication may have several times the length of the waves to be handled without the losses becoming unduly high, the adoption of centralized reception by the use of such an energy feed line is substantially simplified in practice.

The accompanying drawing illustrates the basic idea of the invention by means of an executional example.

Referring to the drawing, 1 is the dipole oscillating within a reflector 2 of any desired type, though both may be replaced by a plurality of unit dipoles oscillating in proper phase relation. The radio frequency energy is taken off by means of coupling loop 3 and is fed by way of feed line 4 and coupling means 5 to the thermionic tube 6. The signal frequency obtained from the latter by demodulation, suitably after additional amplification, is then impressed upon the distribution line. As regards tuning, adaptation of the surge impedance, and construction of the feed wire, the same rules hold good as known from the radio art. For the object of tuning, a part 7, 8, of the energy line may be made symmetrically adjustable in its position.

This is accomplished by varying the length or size of the conductors or leads from coupling 3 extending within or parallel with or adjacent the members 7 and 8 thereby varying the capacity coupling between the line and the circuit 5, and coupling said line to thermionic tube 6.

I claim:

1. In a receiving circuit arrangement adapted to receive waves of less than one meter, a reflector, a dipole adjacent said reflector, an energy feed line coupled to said dipole, a space discharge device circuit having its input circuit coupled to said feed line and means for symmetrically adjusting said feed line for tuning the circuit.

2. An arrangement as claimed in claim 1 including a shield enclosing said feed line.

3. In radio apparatus for the transmission of electrical energy by means of high frequency oscillations of a wave length less than one meter, a member adapted to effect interchange of high frequency oscillations with a natural medium, a thermionic relay circuit, a feed line comprising leads enclosed in a conducting shield, a coupling between one end of said feed line and said interchange member, and a coupling of variable capacity between the other end of said lead lines and the electrodes in said thermionic relay.

4. In radio apparatus for the transmission of electrical energy by means of high frequency oscillations of a wave length less

than one meter, a member adapted to effect interchange of high frequency oscillations with a natural medium, a relay, a feed line including parallel conductors, shielding means for said feed line, means for inductively coupling said feed line to said radiant energy interchange member at one end, a variable capacity in each of said leads, and means for inductively coupling the other end of said feed line to said relay.

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