

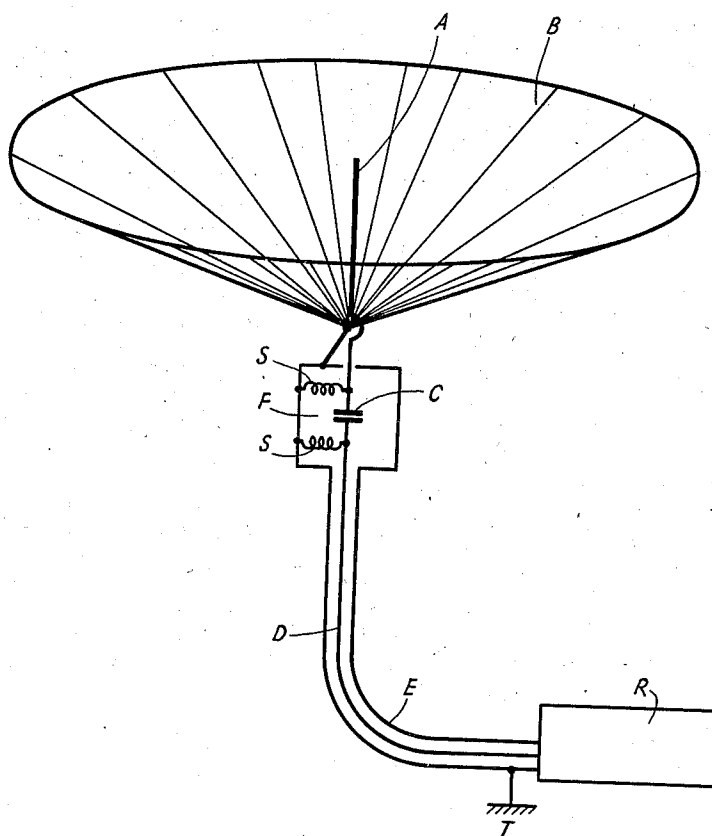
June 8, 1937.

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2,082,820

ANTENNA ARRANGEMENT

Filed Dec. 18, 1935



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UNITED STATES PATENT OFFICE

2,082,820

ANTENNA ARRANGEMENT

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Application December 18, 1935, Serial No. 55,016
In France December 28, 1934

8 Claims. (Cl. 250—33)

This invention relates to an improved anti-stray antenna arrangement and is particularly adapted to short wave reception.

The working conditions in radio centers of reception handling commercial traffic make it sometimes imperative to establish these centers in places where there are many sources of serious strays, this referring more particularly to the receiving equipments installed in the very centers of towns.

The means known in the art to the end of diminishing such stray radiation by direct action upon their sources and which are effective, so far as broadcast fields are concerned, are wholly inadequate for commercial traffic centers whose receivers are responsive and sensitive to fields of an order of magnitude of 1 microvolt.

The present invention has as its object an antenna arrangement which is designed to obtain a very great reduction of strays.

According to this invention, the receiving antenna is installed in the middle of a metallic trellis or latticework in the form of a pyramid or cone, and being open in the direction of the zenith. This antenna is connected with the receiver apparatus by a feeder with interposition of a filter or a resonator adapted to insure a certain amount of selection of the incoming waves. The said feeder consists of an insulated wire disposed in the interior of a metallic pipe which, on the one hand, is connected with the said metallic latticework, and on the other hand with the ground.

Insulation of the said metallic trellis should be insured in a very careful way, and there should be satisfactory electrical connection with the outer pipe of the feeder.

For the reception of short waves, in which more particularly the space waves are utilized, it is feasible to insure a very great reduction of the strays in raising the edge of the metallic trellis as high as the top part of the antenna.

With an antenna constructed in a way as here disclosed, all stray or parasitic radiations due to equipment on the ground are greatly diminished. The presence of the filter allows, on the other hand, of adapting the antenna to the feeder, to reduce the oscillations that might be due to shock excitation of the system. Such oscillations, as a matter of fact, in the absence of this means, could have wave lengths that are greater than the incoming waves and thus be less damped than the others by the passage or transmission across the feeder.

The attached drawing, by way of example, shows a special embodiment of an antenna according to the invention.

Referring to the drawing, A stands for the antenna properly so-called, which for instance, consists of a vertical wire suitably insulated and supported, or more simply of a conducting rod or bar, a pipe, a metallic tower, etc. B represents the screen which extends or is disposed below the antenna and which safeguards the latter from local industrial stray effects or fields.

This screen or shielding means, shown in the shape of a sheet of conical form being open in upward direction, may consist of wires interconnected at the base and at the top end of the said cone and also in intermediary zones. The same could also consist of a sort of metallic trellis or latticework which is suitably supported.

The antenna, by way of a filter consisting, as well known, of an assembly of an inductance S and the capacities C, and a down-lead D, is brought to the receiver R. The down-lead cable D, the filter F, and preferably the receiver R, are placed under or inside a metallic screen or shield E which is connected, on the one hand, with the antenna screen B, and on the other hand with the earth.

It will be understood that in all cases similar constructional arrangements could be used without thereby departing from the spirit of the invention.

What we claim is:

1. Energy collecting system for radio receivers, comprising an aerial located at a height above ground and a shield insulated thereof, said shield having a form of a surface converging to an apex, terminating by an edge and limiting a predetermined space within which the aerial is located, the position of the shield being such that the opening determined by the surface edge is oriented towards the zenith.

2. Energy collecting system for radio receivers, comprising an aerial located at a height above ground and a shield insulated thereof, said shield having a form of a conical surface within which the aerial is located, the position of the cone being such that its opening is oriented towards the zenith.

3. Energy collecting system for radio receivers comprising an aerial located at a height above ground and a shield insulated thereof, said shield having a form of a pyramidal surface within which the aerial is located, the position of the pyramid being such that its opening is oriented towards the zenith.

4. System as claimed in claim 1 in which the shield is formed by a metallic lattice work.

5. Energy collecting system for radio receivers comprising an aerial located at a height above ground, a connection between the aerial and the receiver, a shield insulated of the aerial having a form of a surface converging to an apex, terminating by an edge and limiting a predetermined space within which the aerial is located, the position of the shield being such that the opening determined by the surface edge is oriented towards the zenith, and a connection between the shield and the ground.

6. Energy collecting system for radio receivers, comprising an aerial located at a height above ground, a connection between the aerial and the receiver, a shield insulated of the aerial having a form of a surface converging to an apex, terminating by an edge and limiting a predetermined space within which the aerial is located, the position of the shield being such that the opening determined by the surface edge is oriented

ed towards the zenith, and a connection between the shield and the ground, this connection being disposed concentrically with the said connection between the aerial and the receiver.

7. System as claimed in claim 1, in which the shield edge is situated at least at the level of the top part of the aerial.

8. Energy collecting system for radio receivers, comprising an aerial located at a height above ground, a connection between the aerial and the receiver, a filter for predetermined frequencies inserted in the said connection, a shield insulated of the aerial having a form of a surface converging to an apex, terminating by an edge and limiting a predetermined space within which the aerial is located, the position of the shield being such that the opening determined by the surface edge is oriented towards the zenith, and a connection between the shield and the ground.

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