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A. GOTHE

1,909,615

ANTENNA

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Fig. 1

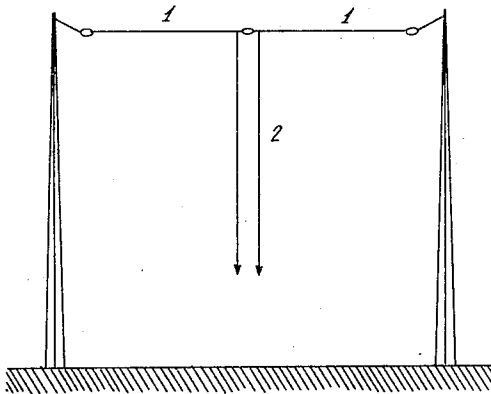


Fig. 2

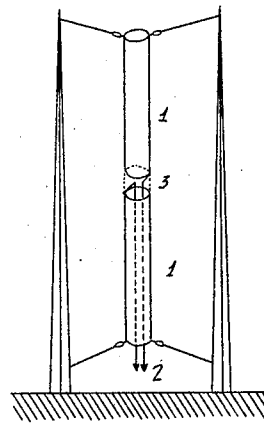
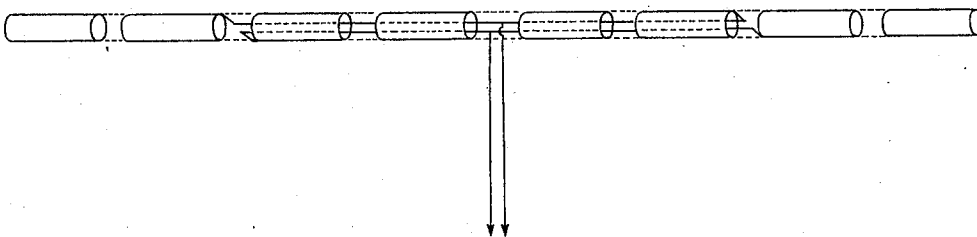


Fig. 3



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ANTENNA

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In the operation of antennæ for transmitting or for receiving electromagnetic waves recourse is often had to what is known as an energy feed or lead line for the transfer of energy between the transmitter, or the receiver, on the one hand, and the antenna, on the other hand.

A case of this kind is illustrated in Figure 1 where parts 1 designate the radiator, while the energy feed line or lead is denoted by numeral 2. However, an energy line of this kind is liable to exhibit disagreeable secondary effects in so far as it tends to disturb the desired propagation of the radiation field. According to this invention, therefore, the radiating antenna part has the form of a tube or funnel wide at both ends, while the energy feed line is disposed inside the radiating antennæ parts and is connected at the desired feeding points.

In the accompanying drawing, Figure 1 illustrates, as already indicated, an old type of lead in line to an antenna, and

Figures 2 and 3 illustrate according to my invention a novel lead arrangement for an antenna,

In one embodiment of the invention as shown by way of example in Figure 2, where again 1 denotes the radiating antenna parts, numeral 2 indicates the energy feed line. Numeral 3 indicates an intermediate part or link between two radiator parts, said link consisting, for instance, of a simple insulator, a coil or a capacity. Also large-sized antenna systems may be built in a similar manner as shown in Figure 3. It is immaterial in this connection whether the antennæ are vertical, horizontal or inclined in relation to the ground; for as the leads 2 are within the radiators 1, they have no effect on the radiant portions 1 of the antenna.

I claim:

1. An antenna system comprising a pair of physically separated and electrically unconnected coaxial conductive radiating cylinders, and a two wire linear transmission line for supplying energy to said cylinders, said two wire line being mounted within and coaxial to one of said cylinders, one conductor of said two wire line being connected

to one end of one of said cylinders, and the other conductor of said two wire line being connected to the adjacent end of said other conductor cylinder.

2. An antenna system as defined in claim 1, the coaxial conductive cylinders being arranged vertically.

3. An antenna system as claimed in claim 1 the coaxial conductive cylinders being arranged horizontally.

4. An antenna system comprising a pair of coaxial conductive radiating cylinders arranged end to end, said cylinders being physically separated from each other and unconnected, and a two wire transmission line for supplying energy to said cylinders, said two wire line being mounted within one of said cylinders, one conductor of said two wire line being connected to one end of one of said cylinders and the other conductor of said two wire line being connected to the adjacent end of the other conductor cylinder.

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