March 21, 1939. A. O. HAUKEDAHL 2,151,102

AERIAL

Original Filed Aug. 7, 1936

Fig. 1.

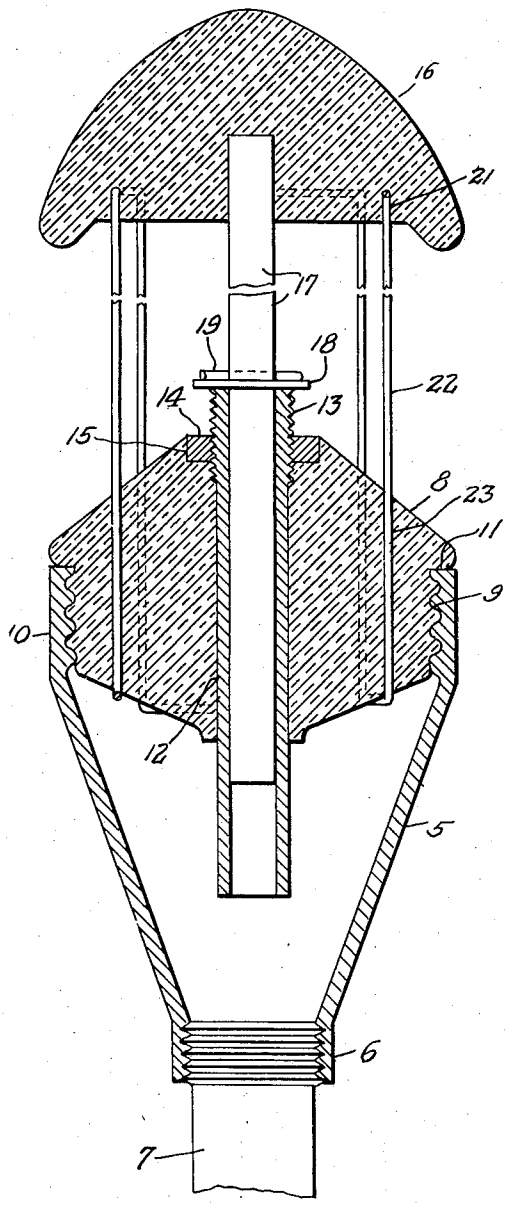
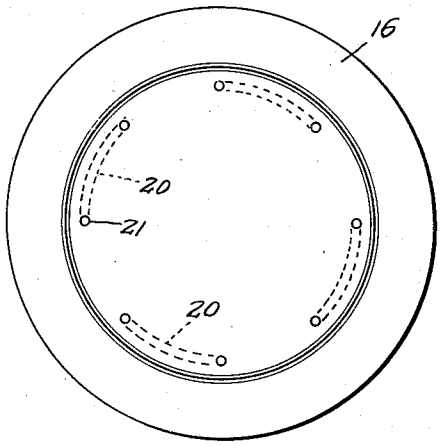


Fig. 2.



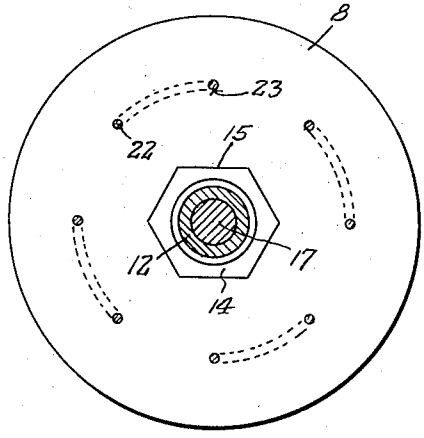


Fig. 3.

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UNITED STATES PATENT OFFICE

2,151,102

AERIAL

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Refiled for abandoned application Serial No. 94,868, August 7, 1936. This application April 15, 1938, Serial No. 202,348. Renewed January 27, 1939

1 Claim. (Cl. 250—33)

This application is substituted for abandoned application 94,868, filed Aug. 7, 1936.

This invention relates to aerials and particularly to outside radio aerials.

An object of the invention is to provide an aerial which will do away with supporting poles, with the exception of a single pole; will eliminate the need of guide wire; and can easily be put up and removed, and used either as a double or single aerial.

It is a secondary objective of this invention to provide a radio aerial with insulation that will be dry in wet weather and by the construction thereof to improve the dielectric qualities of the insulation which over a period of time become lessened by foreign substance lodging on the dielectric qualities of the insulation.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawing wherein:

Figure 1 is a longitudinal sectional view through the aerial.

Figure 2 is a bottom plan view of the top insulator, and

Figure 3 is a view showing the bottom insulator in top plan with certain parts of the aerial shown in section.

Referring to the drawing by reference numerals it will be seen that in the preferred embodiment thereof the aerial comprises an attaching member 5 in the form of a substantial cone having at its apex an internally threaded cylindrical portion 6 adapted to be screwed onto the end of a supporting post 7, such as for example, a roof vent-pipe or other supporting pipe.

Further the aerial comprises a bottom insulator 8 having a cylindrical portion threaded as at 9 and having a threaded fit within the upper cylindrical part 10 of the attaching member 5. Above the threaded section thereof the insulator 8 is substantially conical presenting at the base of the cone a shoulder 11 which abuts the end 9 of the attaching member 5.

The insulator 8 is axially bored to receive a tube 12 in the form of a suitable length of pipe which has an upper externally threaded section 13 onto which is screwed a lock-nut 14 that is accommodated within a suitable recess 15 provided therefor in the top of the insulator 8.

Further the aerial comprises an upper insulator 16 which is suitably secured at one end of a pipe or rod 17 that has a sliding fit within the tube 12 and is secured at the desired adjustment with respect to the tube 12 through the medium of a washer 18 that rests on the upper end 13 of the tube 12 and a lock pin 19 that extends transversely through a suitable opening in the rod 17 and seats against the washer 18 as shown in Figure 1.

The upper insulator 16 is provided with a substantially circular series of relatively spaced arcuate passages or bores 20 terminating at their respective opposite ends in openings 21 that extend through the bottom face of the insulator. This insulator is constructed in umbrella fashion with the skirt hanging down to protect the lower side of the insulator and keep it dry, also protecting the wires.

The bottom insulator 8 has openings 23 therethrough arranged to substantially aline with the ends 21 of the bores 20. The bottom of this insulator will remain dry at all times due to the housing 5 and the top of the insulating having a shedding surface so foreign particles will not lodge thereon.

The aerial body proper is in the form, in the present instance, of a single wire 22 which is threaded through the passages 20 in insulator 16, and through the passages or openings 23 in the insulator 8 in a manner clearly shown in the drawing and in order to provide a circular series of spaced vertical aerial rods as shown. The aerial wire 22 is thus engaged to the base insulator, the turns in the wire being made within the bodies of the insulators to the peripheries of the insulators as clearly suggested.

It will be appreciated that but a single supporting pole or rod will be required for the aerial, and the mounting of the aerial will be such as will dispense with the need of guide wires. It will further be appreciated that the aerial may be easily set up and removed and that it can be used either as a double or a single aerial.

It is thought that a clear understanding of the construction, utility and advantages of an invention of this character will be had without a more detailed description.

Having thus described the invention what is claimed as new is:

In an aerial, in combination of a supporting post having threaded at one end a substantially frustro-conical attachment element having at its forward end an internally threaded cylindrical section adapted to thread onto the threaded end of the supporting post and at its largest end an internally threaded cylindrical section, an insulator member having its upper center dropping off toward its lower edges, said insulator body

sections screw-threaded within the last-named end of the attaching member, said insulator having an axial bore therein, a tubular member in said bore screw-threaded at its upper end, a nut in the upper end of the said insulator screw-threaded on said tubular member adjustably securing said member in said insulator, a rod slidable in said tubular member, means for adjustably securing said rod at predetermined axial position in said tubular member comprising a pin extending through spaced apertures in said rod abutting a washer disposed on the upper end of the said tubular end, a second umbrella type insulator supported on one end of said rod, said insulators respectively provided with openings therethrough and having their respective ends opening through the surface, an aerial wire extending between said insulators and threaded through the openings in the insulators.

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