

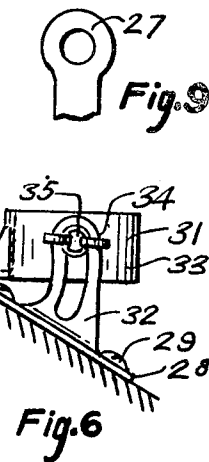
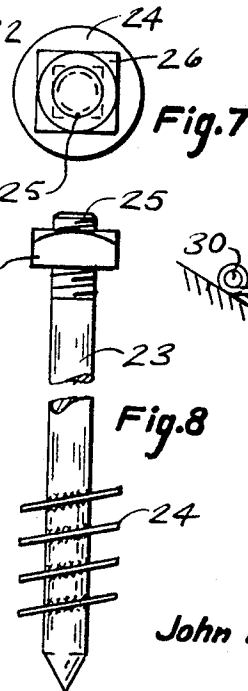
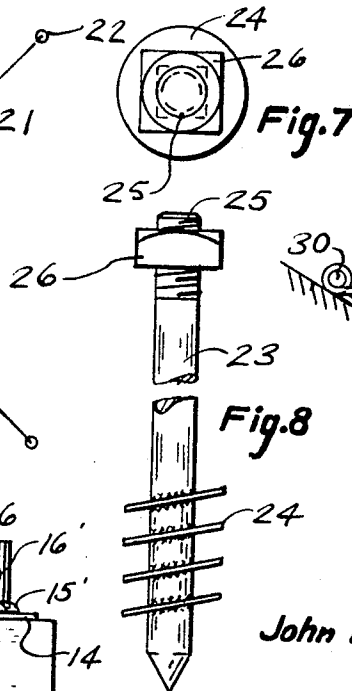
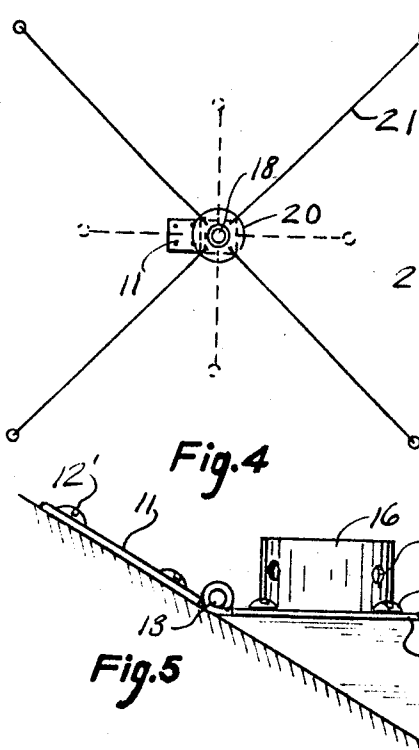
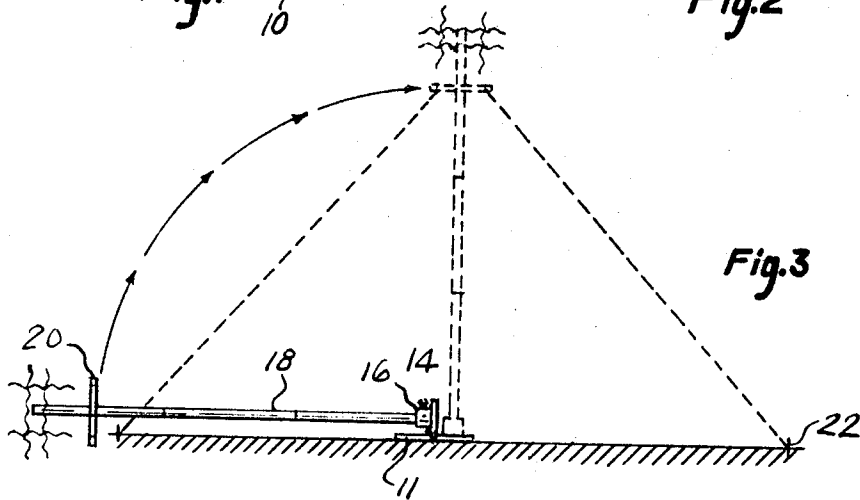
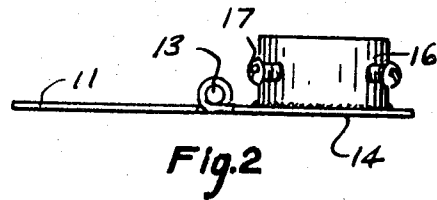
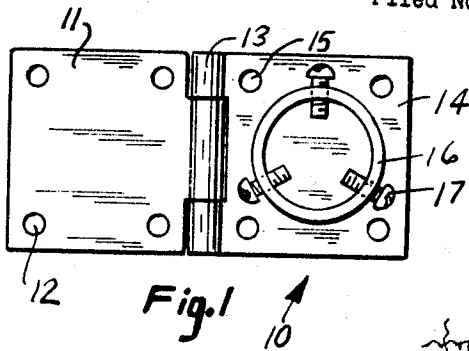
June 17, 1969

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3,450,378

ANTENNA MOUNTING UNIT

Filed Nov. 28, 1966



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3,450,378

ANTENNA MOUNTING UNIT

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Filed Nov. 28, 1966, Ser. No. 597,306

Int. Cl. A47g 33/12, 25/12; A01k 97/10

U.S. Cl. 248—43

1 Claim

ABSTRACT OF THE DISCLOSURE

An antenna mounting base in which a fixed portion of the base is attached to a support structure and an antenna mast is secured to a movable portion of the base. The movable portion pivots on a single axis about the fixed portion to facilitate moving the antenna mast to a vertical position. The movable portion of the mounting base is then permanently secured to the surrounding supporting structure or to the fixed portion of the mounting base to hold the antenna in the vertical position.

This invention relates generally to a mounting unit for the mast of an antenna, and particularly to a mounting unit for an antenna mast which facilitates raising the mast to an upright position and securing it in the upright position. More specifically, the invention relates to a mounting bracket arrangement for an antenna mast, the bracket including a first generally flat member which is pivotally connected to a second member and in which the mast can be secured to the second member after the first member is secured to a supporting structure such as the roof of a building. Then, the mast can be moved to an upright position merely by pivoting the mast which in turn pivots the second member relative to the first member. The second member is then secured relative to the supporting structure so the mast extends generally vertically. Conventional guy wires may also be used to support the mast after it is moved to its upright position.

It is therefore an object of this invention to provide an antenna wherein a layman may erect an antenna without special equipment in a rapid manner.

Another object of this invention is to provide an antenna mounting unit wherein the mounting process is executed in a conveniently accessible manner, that is, the antenna pole is inserted into the receptacle of said unit in a substantially horizontal disposition.

Another object of this invention is to provide an antenna mounting unit in its modified form which may be attached to angularly inclined roofs or inserted into the ground.

Still another object of this invention is to provide an antenna mounting unit which is of generally pivotal or turning nature, is easy to manufacture, safe to use, does not require maintenance, may be installed by only one individual, is of rugged yet flexible construction, may be used with antenna poles of different diameters, and provides maximum utility to its user.

Other objects and advantages of this invention will become apparent from a consideration of the following detailed description taken in connection with the accompanying drawing wherein a satisfactory embodiment of the invention is shown. However, it is to be understood that the invention is not limited to the details disclosed but includes all such variations and modifications as fall within the spirit of the invention and the scope of the appended claims.

In the drawing:

FIGURES 1 and 2 are top plan and side elevated views, respectively, of the receptacle members upon which the antenna pole is mounted.

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FIGURE 3 is a side view illustrating, in full and broken lines, the invention in its lowered and raised positions respectively.

FIGURE 4 is a plan view of the invention seen in FIGURE 3 with the antenna support wires shown in full and additional support wires in broken lines.

FIGURE 5 is a view similar to one in FIGURE 2, but with the pole support attached into an inclined surface.

FIGURE 6 is a view similar to FIGURE 5 showing a modified form of this invention.

FIGURES 7 and 8 are end and side views of a ground stake for use with the invention.

FIGURE 9 is a fragmentary portion showing a pad eye end portion of a modified ground stake.

According to this invention, an antenna mounting unit 10 is provided with a mounting plate 11 having a plurality of spaced apart holes 12 therein. A hinge member 13 extends from one side of plate 11 for the purpose of pivotally connecting it with the antenna support plate or connector structure 14. A plurality of mounting holes 15 are within plate 14. An upwardly extending cylindrical receptacle having a plurality of equally spaced holes 16' is weldingly secured to the top portion of plate 14. Receptacle 16 is adapted to receive the end portion of an antenna pole 18 and secure it within said receptacle 16 by means of screws positioned within holes 16' of the receptacle 16'. The upper portion of the antenna pole 18 is provided with a circular plate 20 which is capable of supporting the end portions of guy or antenna support wires 21 equally spaced from each other thereon.

It should be noted that, in operation, mounting plate 11 is secured to the roof or any other surface by means of screws 12' after the end portion of antenna pole 18 is suitably secured within cylindrical receptacle 16 when said antenna pole 18 is disposed on a horizontal plane. Then antenna pole 18 is pivoted to assume a vertical position (see FIGURE 3) and the remaining antenna support plate 14 is secured to its respective surface by means of screws 15'. The antenna guy or support wires 21 are suitably secured to the metallic anchors 22 each of which are disposed on said surface in a best suited or acceptable manner.

In its modified form (see FIGURES 7, 8 and 9) the antenna may be mounted on ground or any other porous surface utilizing ground stakes or studs 23 which are provided with spiraling blades 24 for threading said studs into the ground. The top portion 25 of each stud 23 is threaded and is capable of facilitating a nut 26 for supporting previously disclosed and described pivotal mounting and support plates 11 and 14. In this arrangement, instead of using nuts, pad eyes may be successfully utilized for guy or support wires.

Still another modification, the invention provides for an angularly disposed base plate 28 secured to an inclined surface by means of screws 29. A hinge member 30 supports receptacle or connector structure 31 which is also supported on brackets 32 for angular positioning of said receptacle 31. Each bracket 32 has a curved slot 33 for admitting the lateral studs 35 extending from the receptacle 31. Wing nuts 34 support studs 35 within their respective slots 33. When said wing nuts 34 are tightened the receptacle 31 and its antenna pole assume the predetermined angular relationship needed to obtain most adequate electronic signal reception for said antenna pole.

What I now claim is:

1. An antenna mounting device to facilitate moving an antenna mast assembly to an upright position relative to a supporting structure and permanently securing the mast in the upright position comprising, in combination a generally flat mounting plate having openings therein to receive bolts to secure the plate to a support structure;

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said mounting plate having a support bracket extending therefrom, said support bracket having an arcuate slot therein;

a connector structure;

connecting means on said connector structure to secure an antenna mast thereto against movement, said connecting means including a cylindrical receptacle; and pivot means connecting said connector structure to said mounting plate for pivotal movement about one pivotal axis only relative to said mounting plate;

said receptacle having a bolt receiving opening therein alignable with said slot to permit inserting a securing bolt through said slot and opening to secure the antenna mast in an upright position relative to said support structure;

whereby, the antenna mast assembly can be readily pivoted to an upright position by securing it to the receptacle of said connector structure after the mounting plate is secured to a support structure, by pivoting the mast about said one pivotal axis, and then securing the connector structure relative to the sup-

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port structure by passing a bolt through said slot and bolt receiving opening.

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U.S. Cl. X.R.

248—237; 343—882

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