United States Patent

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[73] Assignee The United States of America as represented by the Secretary of the Army

[54] MAST SUPPORT
5 Claims, 3 Drawing Figs.

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[51] Int. Cl. H01q 1/12, E04h 12/22
[50] Field of Search ..... 248/38, 44, 48, 163, 188.7, 165, 188, 187, 159, 177; 287/54 B, 56; 52/152; 343/874, 878, 886, 890

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ABSTRACT: A means for supporting a mast that includes a pair of spaced, joined, parallel top and bottom plates with the top plate provided with an opening that accommodates a tube extending to the bottom plate in which a mast may be supported. Both plates have corresponding opposing tab portions having corresponding openings through which supporting legs can be inserted for support of the mast structure.

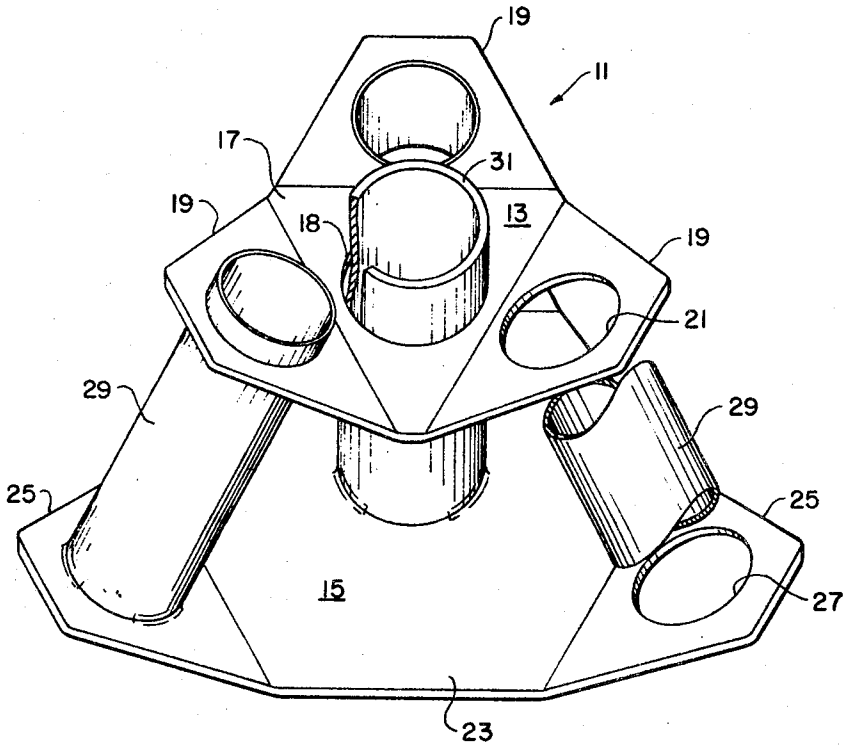


FIG. 1

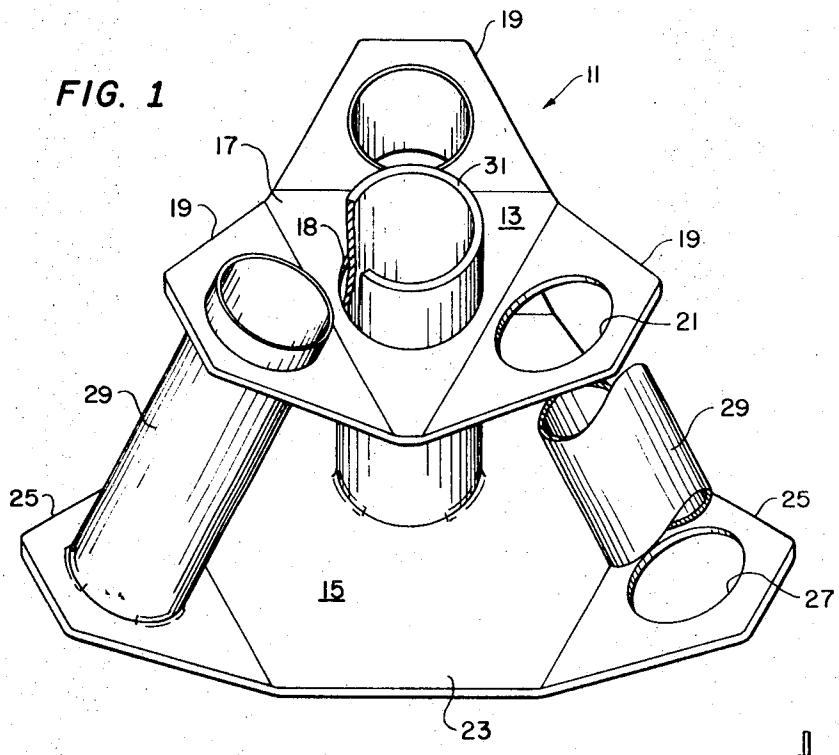


FIG. 2

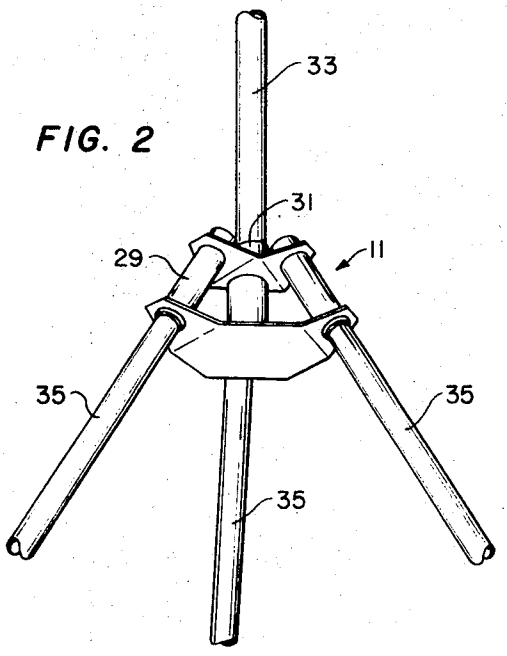
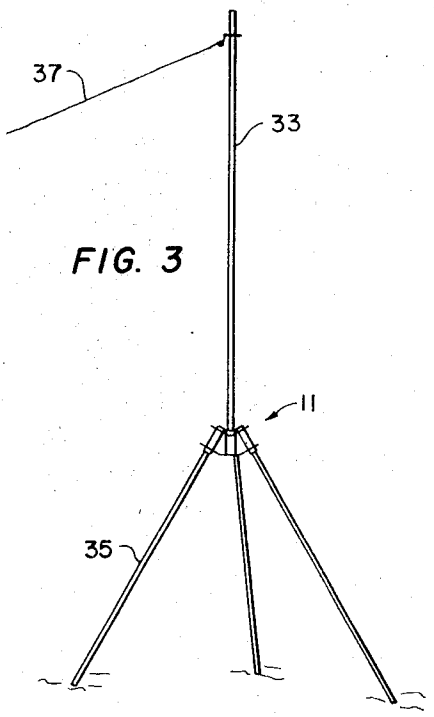


FIG. 3



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MAST SUPPORT

The invention described herein may be manufactured, used, and licensed by or for the Government for governmental purposes without the payment to me of any royalty thereon.

BACKGROUND OF THE INVENTION

The present invention relates generally to a support for a mast which is used to carry an antenna or like device.

At the present time radio antennas are conventionally supported between two spaced masts. Such masts are usually supported by a plurality of guy wires which in turn are secured to stakes in the ground in the area where the antenna is to be utilized. Such method is usually time consuming in that stakes have to be buried in the ground, guy lines secured to both the mast and the stakes and additional hardware, such as winches or other form of tensioning device, are necessary for the complete erection of the antenna mast. It has further been found that much terrain, such as muddy or sandy conditions, are not suited for the insertion of stakes, resulting in an unreliable and unsafe condition for the erection of an antenna. In military operations where the time factor in the erection of any equipment is of prime importance, it is apparent that the multistep operation to erect a guy supported antenna mast can be of considerable disadvantage.

SUMMARY OF THE INVENTION

It is the general purpose of this invention to provide a simple mast support into which can be quickly and readily assembled a mast assembly with a minimum of personnel and which does not possess any of the disadvantages heretofore indicated. To attain this, the present invention contemplates a mast support which comprises essentially spaced parallel top and bottom plates having a plurality of respective upwardly extending opposing tab portions having aligned openings therein that are joined by a series of tubular elements that serve to interconnect the plates and also to accommodate supporting legs for the mast assembly, and further including a central opening in the top plate for supporting and confining a mast that rests on the bottom plate.

BRIEF DESCRIPTION OF THE DRAWING

The exact nature of the invention will be readily apparent from consideration of the following specification relating to the annexed drawing in which:

FIG. 1 is an isometric view of the mast support of the present invention;

FIG. 2 is a perspective view, in part, of the device shown in FIG. 1; and

FIG. 3 shows the support device as a means for supporting an antenna mast.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In the drawing, with particular reference to FIGS. 1 and 2, the mast support is shown designated generally at 11. The support 11 comprises essentially a pair of parallel spaced plates 13 and 15 wherein plate 13 is the top plate and plate 15 the bottom plate. Plate 13 includes a central portion 17 of substantially triangular configuration, having a central tubular opening 18 and having respective tab portions 19 that extend upwardly from the respective sides of the central portion 17 at an angle of approximately 30°. Each of the tabs 19 are provided with a tubular opening 21 which are located or spaced in

the following manner. Assuming a straight line is drawn from a vertex of the triangular portion 17 to the middle of the opposite side and continue as a diameter of the opening 21. If a second such straight line is drawn through the next adjacent opening there would result an angle of 120° between the assumed lines.

The bottom plate 15 includes a central portion 23 that is substantially hexagonal in configuration and likewise includes three tabs 25 that extend upwardly approximately 30° from the central portion 23. The tabs 25 of the bottom plate and the tabs 19 of the top plate are directly opposing and parallel to each other. The tabs 25 are also provided with central openings 27 that are directly opposite the openings 21 of the top plate and aligned therewith. Extending through and between the respective opposing pairs of opening 21 and 27, and secured therein, are respective tubes 29. Securing of the tubes 29 can be accomplished by a weld or similar technique. There is also provided a tube 31 which extends from the opening 18 of the top plate to the surface of the bottom plate 15. The tube 31, also secured through the opening 18 to the bottom plate 15, serves as the means for supporting a mast as hereinafter described.

FIG. 3 shows utilization of the support 11 in supporting a mast 33 for an antenna 37 or other desired device. The base of the mast 33 is positioned and confined within the tube 31. Extending through the tubes 29 are legs 35 which serve to support the entire assembly.

In the preferred embodiment heretofore described it has been indicated that the central portions of the top and bottom plates 13 and 15 respectively are of a preferred configuration. It is to be understood however that the invention is not so limited in that the entire plate, or the central portions thereof, can be of any desired geometric configuration.

We wish it to be understood that we do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

What I claim is:

1. A mast support comprising a pair of spaced parallel interconnected top and bottom plates, each of said plates having a plurality of upwardly extending discrete opposing tab portions having respective aligned opposing openings in each of said tabs, means for interconnecting said top and bottom plates, and further including a central opening in said top plate for supporting and confining a mast therein that rests on the top surface of said bottom plate.

2. A mast support of the kind set forth in claim 1 wherein the tabs of both top and bottom plates extend upwardly 30° from the surfaces of the respective plates.

3. A mast support of the kind set forth in claim 1 wherein said means for interconnecting said plates comprise a plurality of tubes separately extending between the opposing pairs of openings and secured therein.

4. A mast support of the kind set forth in claim 1 and further including a tube extending between the opening in said top plate to the upper surface of said bottom plate and secured thereto.

5. A mast support comprising a pair of spaced parallel interconnected top and bottom plates, each of said plates having a flange that extends upwardly approximately 30° from the surface of each plate, said flanges having aligned respective opposing openings therein, means for interconnecting said top and bottom plates, and further including a central opening in said top plate for supporting and confining a mast therein that rests on the top surface of the bottom plate.