March 28, 1961 C. F. ADICKES 2,976,967

GUYING TELEVISION ANTENNAS

Filed Sept. 17, 1956 2 Sheets-Sheet 1

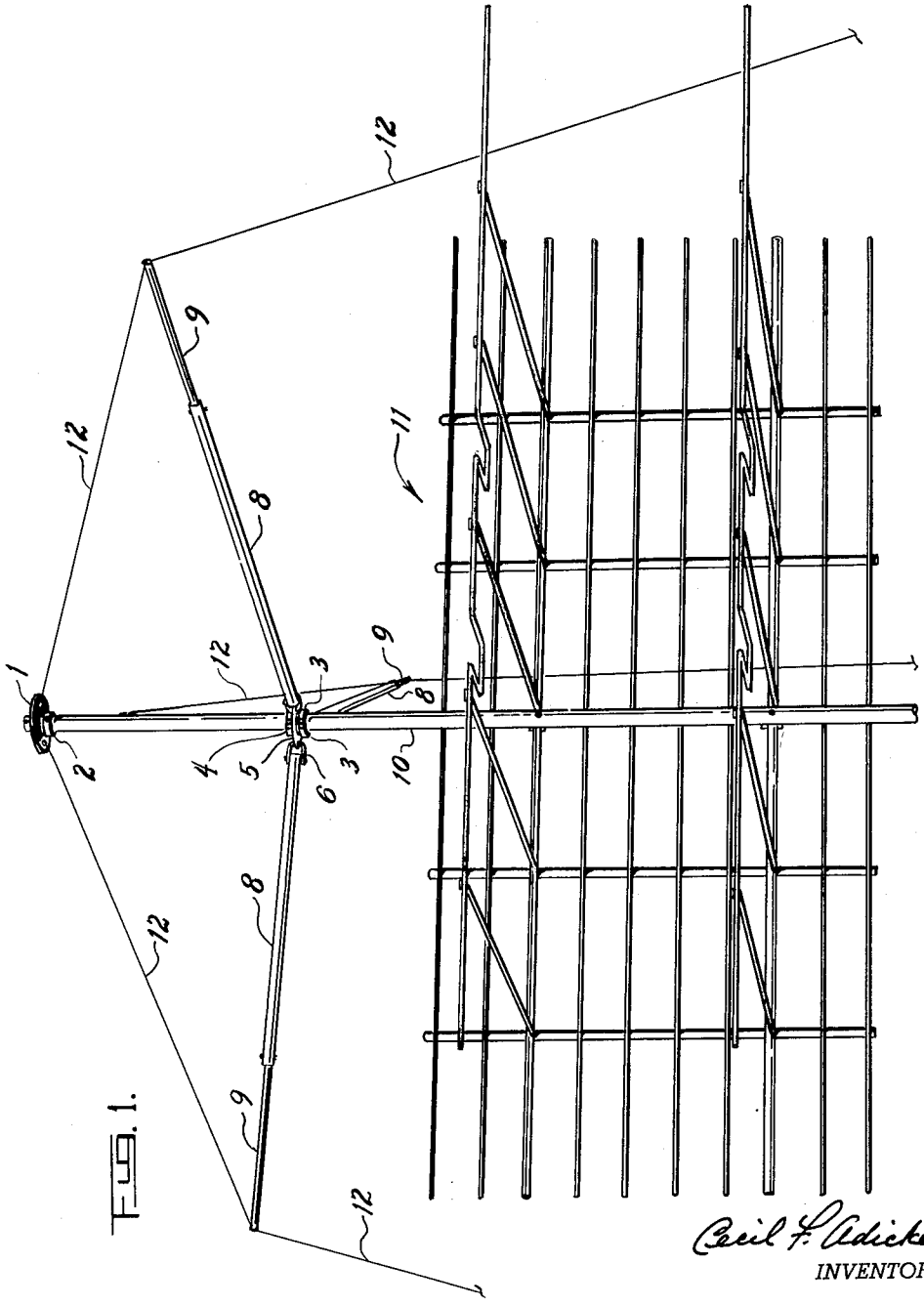


FIG. 1.

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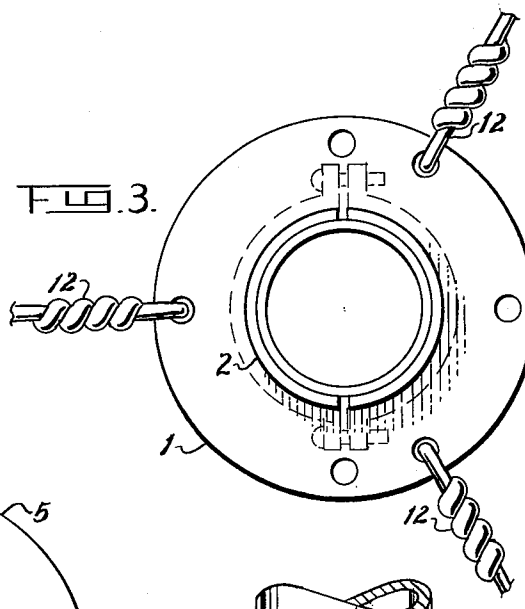


FIG. 3.

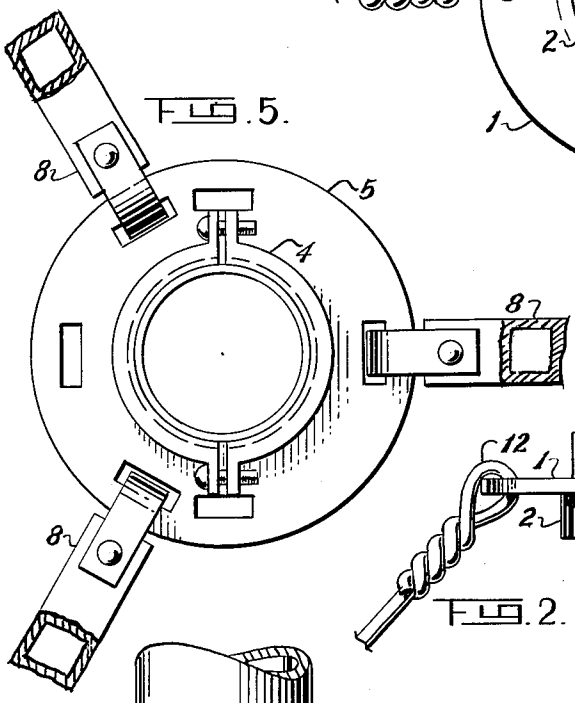


FIG. 5.

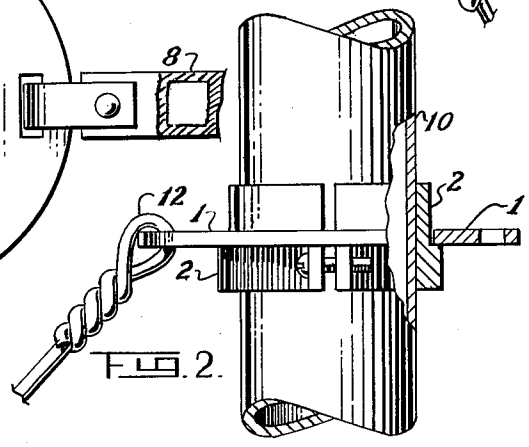


FIG. 2.

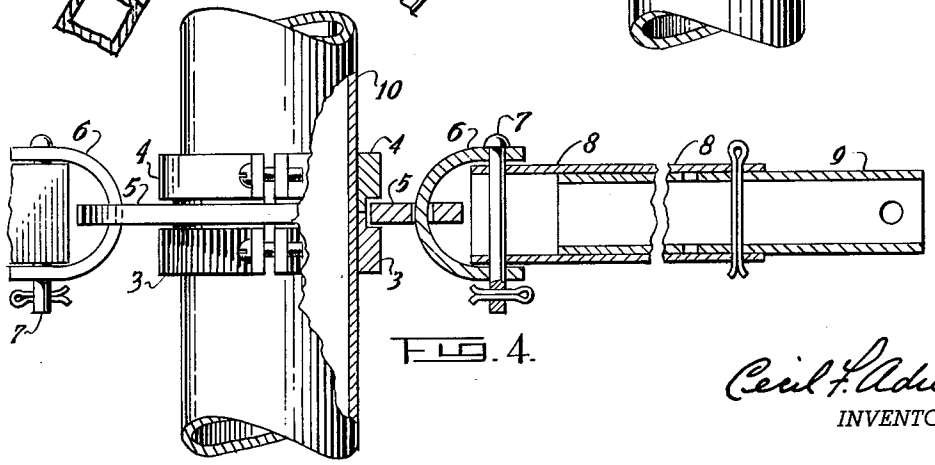


FIG. 4.

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GUYING TELEVISION ANTENNAS

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3 Claims. (Cl. 189—31.5)

This invention relates in general to improvements in guying television antennas; more particularly the higher types, such as used in fringe areas, against windstorm damage. Although the device is designed for installation at the uppermost point on the mast, above antenna and rotator (where such is used), its design is such that mast and antenna may be easily rotated, without interference with guy wires which radiate from top point of mast.

It is obvious that, if excessive wind swaying is to be prevented, the antenna must be guyed at its uppermost point, where the sway is the greatest. It is believed that no previous means for such top guying has, as yet, been available to the general public and antenna installation practise up to the present date has, universally, been limited to the use of guy wires only at points below the antenna and rotator. Antenna installation practise has also established the fact that, in the many fringe areas of the country, best television reception is obtained by the use of very high antennas of the radar screen type; which types present a very considerable vertical area of component parts to oncoming winds, and with no previous means for guying at the top of the mast, casualties to antennas have been many and widespread.

This invention is designed, specifically, to provide a practical and economic means of guying television antennas at the uppermost point of their masts and thereby reduce to a minimum any swaying caused by winds which, otherwise, might result in serious damage to the structure. As above stated, the design of the device also permits of the use of a rotator and the entire antenna, even though of the largest dimensions, horizontally and vertically, in use today, may easily be rotated below the top guying without interference by such guy wires. The design of the device provides, also, a practical means of regulating the amount of clearance needed for various sizes of antenna structures and for various space areas below, which may be available for the complete antenna installation.

A further object is to provide a device that will be simple of design, rugged of construction and economical of manufacture, as well as easy to install. Further objects and advantages of this invention will be apparent, from consideration of the structure and relative arrangement of components, as indicated in the specification and illustrated by the accompanying drawings, of possible embodiments of the invention, in which drawings:

Fig. 1 shows a view in perspective of the entire device in a typical installation, using regular mast and a popular type of fringe area, all channel antenna.

Fig. 2 shows full scale view in elevation and partly sectional of the upper collar and guy ring, to which one of the guy wires is attached.

Fig. 3 shows plan view of the same details as shown in Fig. 2.

Fig. 4 shows details in elevation and partly sectional of lower collars in the correct position with each other; the guy ring positioned between the two collars, to which ring the telescoping arms are flexibly connected by means of U-shaped straps and pins secured by cotter keys.

Fig. 5 shows, in plan view, the same parts arrangement as in Fig. 4.

Referring more specifically to details of drawings and component parts numbered 1 to 9, which comprise the entire device, with mast 10; typical antenna 11 and regular guy wires 12, used to show the function and method of installation; a two piece, die cast, metal collar, with flanged portion providing support and bearing surface for the sheet metal, stamped guy ring 1, is securely clamped to the uppermost portion of mast 10, by means of two screws through the outward projections of collars 2. At a lower point, approximately midway between the top of mast 10 and the top of antenna 11, are positioned collars 3 and 4, with structural design similar to upper collar 2, except with narrower flanged sections, placed in reverse positions with respect to each other and securely clamped by means of screws to mast 10. Positioned loosely between the said collars 3 and 4 is the special ring 5, with rectangular shaped slots for attachment of three or more telescoping, box sectioned arms with sections 8 and 9, flexibly coupled to ring 5 by means of U-shaped strap 6 and pin 7. At the other ends of arm sections 9, means are provided for the attachment of guy wires 12, which continue outward and downward to their respective points of anchorage on roof of house structure, or ground, as conditions permit.

These drawings and this specification show, for the purpose of illustration, one form, or design, in which my invention may be embodied, but it is to be understood that the invention is not to be limited to this specific disclosure, but may be modified and embodied in various other forms without departure from the spirit and the intent of the invention as defined by a proper interpretation of the claims which follow.

I claim:

1. A device for improved guying of television antennas, comprising a plurality of equally, circumferentially spaced, rectangular, box sectioned, telescoping metal arms, each arm with means flexibly coupling to an antenna mast, at a selected point above the top of the antenna structure, with means attaching guy wires at the outer ends of each of the said arms; which guy wires, after the said attachment, extend upward and inward to the extreme top of the mast, at which point on the mast are provided means securing the said wires, to permit of rotatability of the antenna and the mast within both the upper and the lower mast connections.

2. A television antenna guying device comprising a plurality of equally, circumferentially spaced, rectangular, box sectioned, telescoping arms; each arm coupled at its inner end to the mast by means of two sets of two piece, die cast, flanged metal collars, rigidly clamped, in reverse position to each other, to the said mast by means of two screws inserted through outward projections on the outer circumference of the said collars, with a sheet metal, stamped ring, loosely positioned around the flanges of the collars and possessing a plurality of rectangular shaped slots for the flexible attachment of U-shaped, strap metal couplings; which couplings are attached to the inner ends of the said arms by means of pins and cotter keys.

3. A television antenna guying device comprising a plurality of equally, circumferentially spaced, rectangular, box sectioned, telescoping arms; each arm with the means for flexible coupling to an antenna mast, at a point above the top of the antenna, with means for the attachment of guy wires at the outer end of each of the said

arms; which guy wires, after the said attachment, extend upward and inward to the extreme top of the mast; at which point on the mast the said guy wires are secured to an ordinary, standard type guy ring, by means of a plurality of holes in the said ring, which is positioned loosely over the upwardly flanged bearing surfaces of a two piece, screw clamped collar.

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