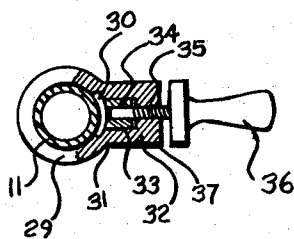
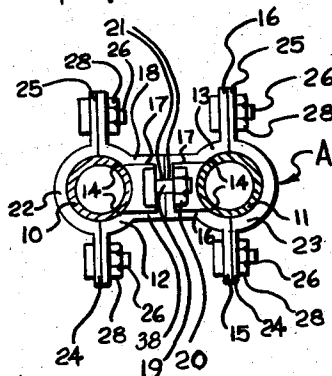
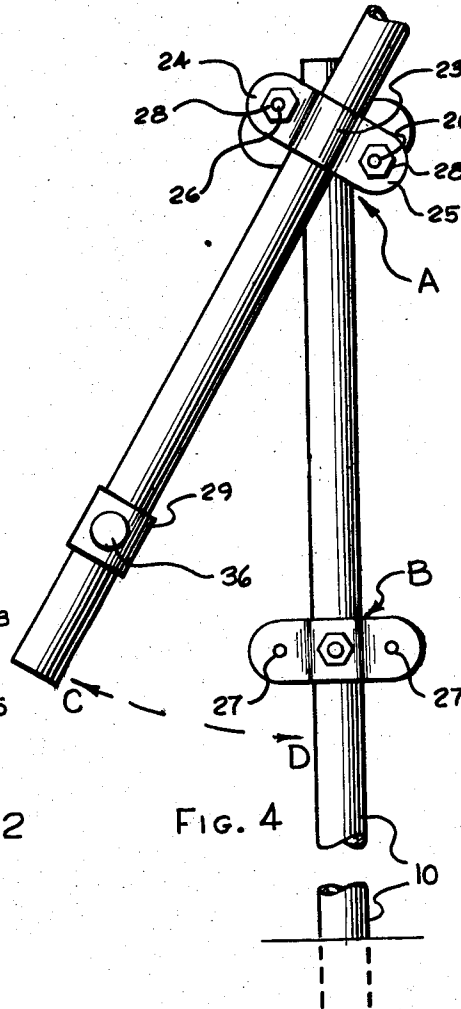
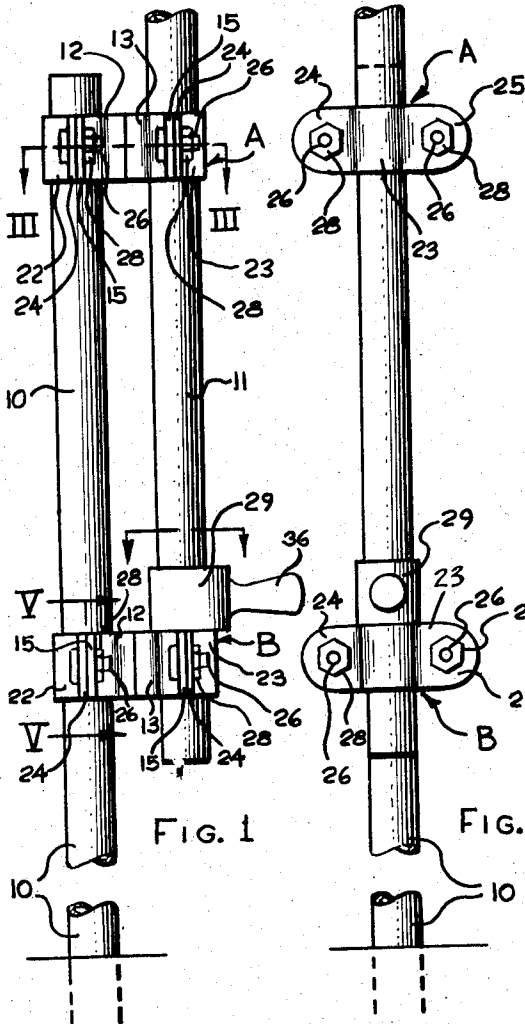


2,882,080

Filed June 12, 1953



INVENTOR.
LOREN D. BURNS

BY *M. Y. Charles*
ATTORNEY.

1

2,882,080

TELEVISION ANTENNA SUPPORT DEVICE

Loren D. Burns, Douglass, Kans.

Application June 12, 1953, Serial No. 361,396

3 Claims. (Cl. 287—99)

My invention relates to an improvement in television antenna supports. An object of my invention is to provide a simple and inexpensive device in which standard steel or other suitable tubing can be used as the supporting elements for the antenna.

A further object of the invention is to provide a simple clamp like fitting that is designated to hold the antenna at any desired height within the limits of the length of the supporting tubing that is used and also allow the antenna supporting tube to be revolved for antenna directional adjustment, and also to provide means whereby the tube supporting the antenna may be rocked to lower the antenna to the ground for repair, adjustment or any other obvious purpose.

A still further object of the invention is to provide a clamp like supply tying element of the kind mentioned in which duplicate parts are employed to provide the clamp or tubular holder and supporting elements and a standard machine bolt may be used to provide a pivotal jointer of two of the adjacent and duplicate parts of the clamp or tube holder device to permit the rocking action of the tubular antenna supporting element as and for the purposes above mentioned. In this device there is actually only two clamp parts and two of each part are used to provide the clamp assembly. In this device, made as it is, the manufacturing problem is materially simplified and cheapened because only two patterns and castings will have to be made to acquire all of the clamp parts in the device and these parts can be made as castings and used without any machine work, therefore they are cheap, easy and comparatively fast to make; the balance of the device is just standard bolts that can be purchased in any hardware store or from any dealer who handles bolts.

Now referring to the accompanying drawings in which similar numerals of reference designate the same parts throughout the several figures of the drawings; Fig. 1 is a side view of a television antenna support and showing my improved clamp and pivotal mounting device for the tubular elements forming the antenna support.

Fig. 2 is a front view of the structure and parts shown in Fig. 1.

Fig. 3 is a cross sectional detail view of the upper clamp and pivotal mounting device. The lower clamp device is a duplicate of the upper clamp device.

Fig. 4 is a side view of the television antenna supporting device and showing how, by the use of my improved clamp and pivotal mounting device the antenna supporting tube of the device can be rocked to lower the antenna to the ground as above mentioned.

Fig. 5 is a detail front view of one of the pivotal and clamp elements, the view being as seen from the line V—V in Fig. 1 and looking in the direction of the arrows, the supporting tube for the device being removed for convenience of illustration.

Fig. 6 is a detail plan and sectional view of the longitudinal tube retaining ferrule and rotatable adjustment device for the antenna supporting tube.

In the drawings the device is provided with a second

2

tubular element 11 that is the support for the antenna (not shown) which is supported on the upper end thereof. The tubular antenna support 11 is held parallel to the tubular support element 10 and in a comparatively close spaced apart position therefrom by means of pivotal clamp arrangements A and B which are duplicates of each other and consist of two clamp elements 12 and 13 each having a half circle concave face 14 and outwardly extending ears 15 and 16, one at each end of the half circle. At the central portion of each clamp element 12 and 13 is an outwardly extending boss-like portion 38 in which is formed a multisided recess 17 that is fashioned to receive either the head 18 of a bolt 19 or a nut 20 that is threaded on the bolt 19, the bolt 19 passing through holes 21 that extend from the recesses 17 to the outside of the bosses 38. This structure forms a pivotal mounting or connection between the two clamp halves 12. To assemble this structure it is only necessary to slip a bolt 19 through both of the holes 21 in the two clamp halves 12 and 13 and the head 18 of the bolt 19 is seated in the recess 17 of one of the clamp halves 12 and the threaded end of the bolt 19 extends into the recess 17 of the other clamp half 13 whereupon a nut 20 may be inserted into the recess 17 to such a point that the nut 20 engages the threaded end of the bolt 19 whereupon the two clamp halves 12 and 13 may be revolved in opposite directions to screw the nut 20 on the bolt 19 to such a point that the opposing faces of the bosses 38 engage each other and thus the pivotal connection between the two clamp halves 12 and 13 is made.

Each clamp half is provided with a clamp cap 22 and 23, each of which have outward extending ears 24 and 25 that may be placed in registry with the outwardly extending ears of the clamp halves 12 and 13 and bolts 26 may be passed through registering holes such as shown at 27 in the registering ears of the clamp halves and their respective clamp caps. Nuts 28 are threaded on the bolts 26 to tightly hold the tubular elements 10 and 11 that are held in the clamp assemblies A and B.

The device is further provided with a ferrule 29 that is slidably fitted around the tubular element 11. The ferrule 29 is provided with curved clamp shoe 30 that is fitted in a notch 31 in the inside of the wall of the ferrule 29. The ferrule 29 is provided with an outwardly extending boss-like portion 32 in which is formed a recess 33 in which is slidably seated a sleeve-like socket formation 34 that is an integral part of the clamp shoe 30. A hole 35, the defining wall of which is threaded, extends from the recess 33 on through the balance of the boss 32. The device is further provided with a handle element 36 on which is rigidly carried a threaded stud 37 that is threaded into the threaded hole 35, the free end of the stud being seated in the socket 34 so that as the stud 37 is turned the advancement of the stud will press the clamp shoe 30 to engage the tubular element 11 in a clamping action to rigidly hold the ferrule 29 in a fixed adjusted position on the tube 11 and the ferrule may rest on top of the clamp element 23—13 so if the clamp elements 23—13 in both assemblies A and B are left loose on the tubular element 11, the tubular element 11, on which the antenna is supported, may be adjustably revolved by the handle 36 for the directional adjustment of the antenna and at the same time the ferrule 29 will prevent the tubular element 11 from sliding downwardly through the clamp 23—13 in both assemblies A and B.

This arrangement makes it possible to move the tubular element 11 up or down for elevational adjustment and to revolve the tube 11 for directional adjustment of the antenna, and if for any reason, it is necessary to reach the antenna for repairs, or adjustments of any kind thereon, the clamp cap 23 of clamp B may be removed and the tubular element 11 rocked in the direction of the

3

arrow C (as shown in Fig. 4) so that the antenna may be rocked to or toward the ground for purposes above mentioned. Such repairs and adjustments having been made, the antenna may be returned to its original position by rocking the tubular element 11 in the direction of the arrow D to be reseated in the clamp element 13 and the clamp cap 23 may be replaced to hold the tubular element 11 in place.

After the directional adjustment of the antenna has been made by turning the tubular element 11, the bolts and nuts 26-28 may be tightened so that the clamp device rigidly holds the tubular element 11 in its adjusted rotatable position.

Now while the device as shown and described is probably the preferred form of the device, it is to be understood that such modifications may be employed as lie within the scope of the appended claims without departing from the spirit and intention of the invention. Now having fully described my invention, what I claim is:

1. An antenna support device of the kind described; said device having a stationary primary support member, and a secondary adjustable support member; a plurality of clamp members; said clamp members being spaced apart and being duplicates of each other in structure, each of said clamp members having a pair of elements pivotally joined together, each of said elements having a recess therein, one of said recesses receiving and being fitted partially around the said stationary antenna support member, the other said recess receiving and being fitted partially around the said adjustable antenna support member; said clamp members each having a pair of clamp cap elements, one of said cap elements being fitted partially around the said stationary antenna support member and being rigidly and detachably attached to one of the pivotally connected clamp elements to rigidly support its respective clamp device on the said stationary antenna support member, the other said clamp cap element being rigidly fitted partially around the said secondary adjustable antenna support member and being rigidly and detachably attached to its respective pivotal

4

clamp element for the rigid support of the said secondary support member of the antenna in its selected adjusted position, one of said clamp members being detachable from one of its support members to permit the tipping of the adjustable antenna support member about the pivotal axis of the other clamp member.

2. An antenna support device of the kind described; said device having the structure, parts and arrangement thereof as defined in claim 1; said cap clamp elements being loosenable from their respective support members to permit the longitudinal adjustment of the said support members relative to each other and also the rotary movement of the antenna for directional adjustment of the antenna.

3. An antenna support device of the kind described; said device having the structure, parts and arrangement thereof as defined in claim 1; said cap clamp elements being loosenable from their respective support members to permit the longitudinal adjustment of the said support members relative to each other and also the rotary movement of the antenna for directional adjustment of the antenna, and means rigidly attached to and detachable from the said secondary antenna support member for lifting and revolving the secondary antenna support member for adjustment purposes as aforesaid.

References Cited in the file of this patent

UNITED STATES PATENTS

110,434	Clarke	Dec. 27, 1870
1,525,461	Moors	Feb. 10, 1925
1,599,213	Coupal	Sept. 7, 1926
1,803,508	Rossmann	May 5, 1931
2,548,650	Brandt	Apr. 10, 1951
2,611,456	Bader	Sept. 23, 1952
2,641,430	Secofsky et al.	June 9, 1953

FOREIGN PATENTS

5,451	Switzerland	Aug. 18, 1892
355,317	Great Britain	Aug. 21, 1931