Sept. 27, 1955 H. W. ROBINSON 2,718,941

SUPPORTED ANTENNA MAST

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Fig. 1.

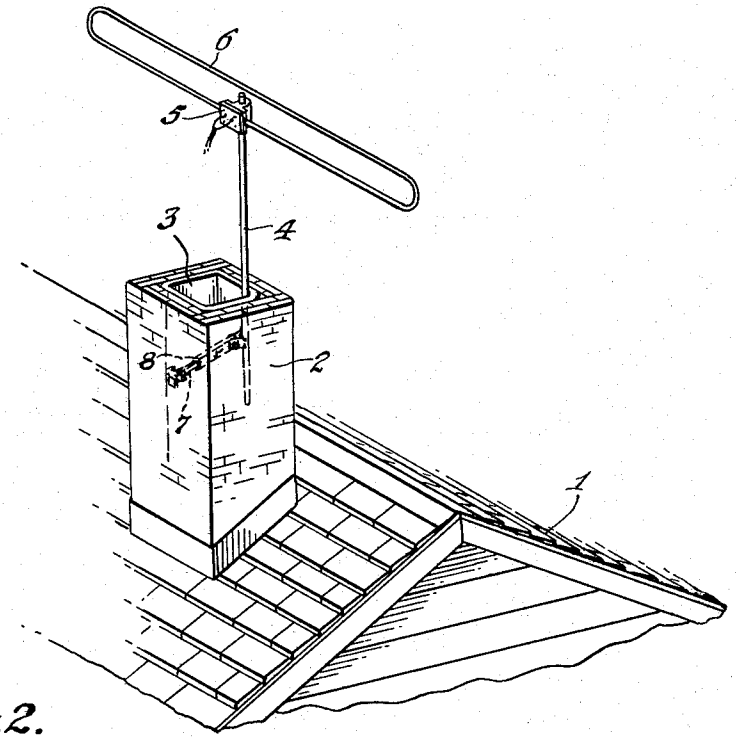
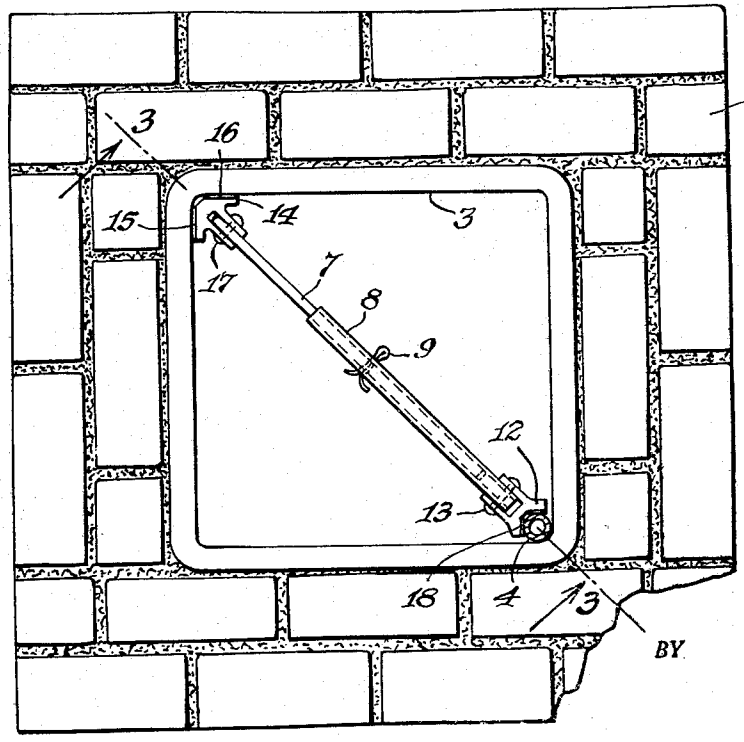


Fig. 2.



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Fig. 3.

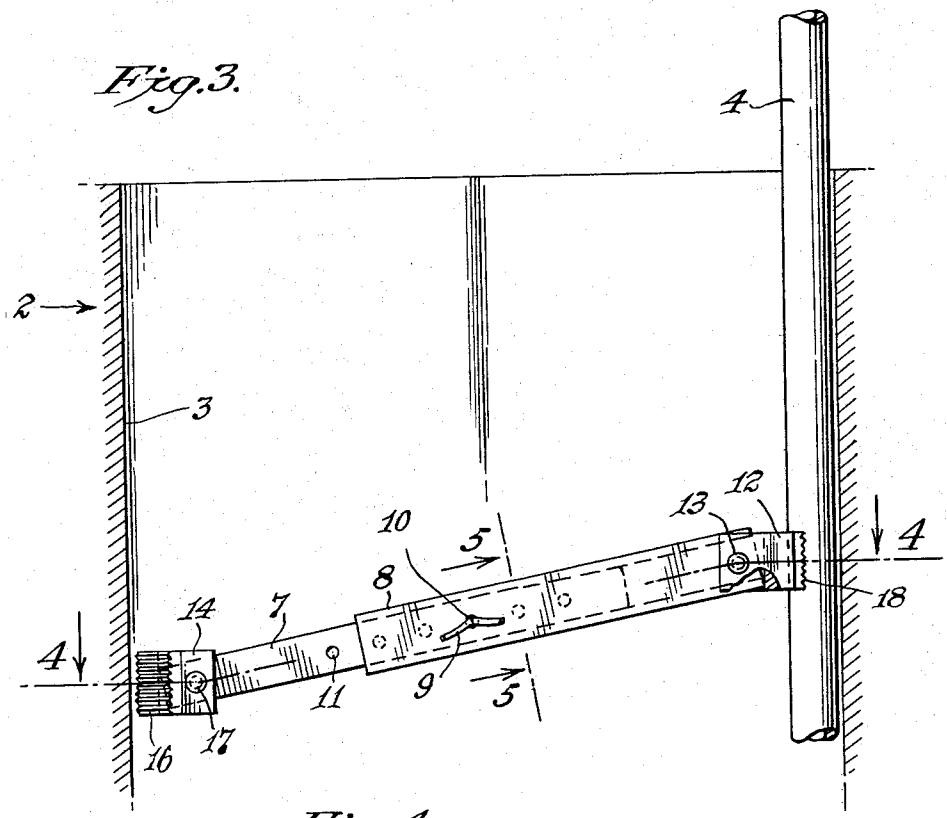


Fig. 4.

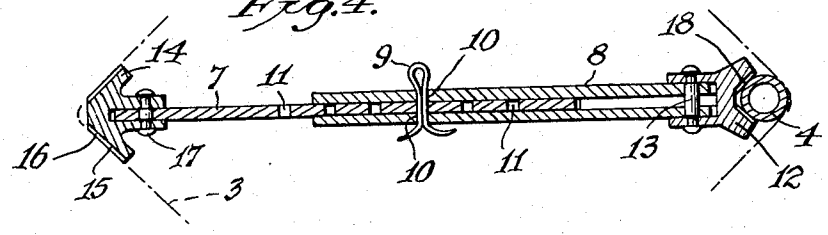
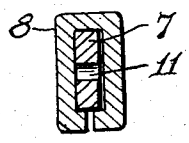


Fig. 5.



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SUPPORTED ANTENNA MAST

Homer W. Robinson, Stamford, Conn.

Application August 22, 1952, Serial No. 305,783
1 Claim. (Cl. 189—28)

This invention relates to a mount of the type comprising a mast projecting from a building. The mount is particularly intended to provide a support for a radio antenna of the type used to pick up television and frequency modulation radio signals.

One of the objects is to provide an inexpensive, effective and easily applied device for installing an antenna mast. Another object is to provide the described type of mount by using an existing building structure, such as a chimney, combined with a mast and a mast-fastening device in such a fashion that the complete mount may be assembled by the average home owner.

A specific example of the invention is illustrated by the accompanying drawings:

Fig. 1 is a perspective of the complete mount supporting a folded dipole antenna;

Fig. 2 is a top or plan view of the device;

Fig. 3 is a vertical section taken on the line 3—3 in Fig. 2;

Fig. 4 is a longitudinal horizontal section of the device itself taken on the line 4—4 in Fig. 3; and

Fig. 5 is a cross section taken on the line 5—5 in Fig. 3.

Referring first to Fig. 1, the roof 1 of a residence building, for example, has a brick chimney 2 projecting upwardly therefrom and in which there is an open-topped smoke passage 3. A mast 4 has a bracket 5 at its upper end supporting a folded dipole antenna 6 proportioned for resonance in either the FM or TV commercial broadcasting wave length bands.

The mast 4 is inserted in a vertical position longitudinally in the passage 3 a substantial distance and against a portion of the passage's side, the balance of the mast, of course, projecting well above the passage's top as shown. Referring now to Figures 2 and 3 in particular, the passage 3 is shown with a rectangular shape and the mast 4 is positioned in one of the corners. There the mast is firmly held by a shifting strut formed by intertelescoping strut sections 7 and 8, the section 7 sliding inside of the section 8 and a removable cotter pin 9 or the like being passed through holes 10 in the walls of the section 8 and through an appropriate one of a series of spaced holes 11 formed in the section 7 and which is registered with the holes 10. The mutually remote ends of the sections 7 and 8 respectively engage the mast 4 and the diametrically opposite corner of the chimney passage 3, and the strut is adjusted to have an end-to-end length equalling the distance between these corners and is wedged down between these corners with its respective ends engaging the mast 4 and the opposite corner. The strut is arranged so that it declines from the mast to the other corner with the diameter of the mast 4 making the distance shorter so that the strut wedges the mast in position tighter and tighter as the strut shifts towards a horizontal position.

The end of the section 8 that engages the mast 4 is provided with a saddle 12 which engages the mast by straddling the latter, this saddle being fastened to the shifting strut section 8 by a pivotal connection 13. The end of the strut section 7 is provided with a shoe 14 having a right angular surface 15 contoured to fit in the corner of the passage 3, this surface having horizontal teeth 16 shaped to dig into and thus firmly engage the corner surface of the chimney passage 3. This shoe 14 is connected to the end of the section 7 by a pivotal connection 17.

It can now be seen that one element of the combination, of the entire installation, comprises a strut made in sections constructed and arranged for interconnection at a plurality of longitudinal positions, together with a suitable means for effecting this interconnection at any of these positions. The opposite ends of the strut have the described pivotal end members comprising the elements described. This device may be sold by itself inexpensively, or may form a part of a kit including the mast and antenna assembly.

With this equipment installation may be easily effected by the average home owner by placing the mast down into the chimney an appropriate distance and, having previously adjusted the length of the strut device so that its end-to-end length equals the diagonal of the rectangular chimney passage, thrusting the strut device down in the chimney passage with one end engaging the mast and the other end engaging the opposite chimney passage corner, the diameter of the mast making this distance appropriately shorter so that a wedging action is effected. The end fittings may pivot so that their ends firmly engage the respective parts to be gripped. As shown the saddle 12 may also have teeth 18 so that both the mast and the opposite chimney passage corner are firmly gripped. When adjusted as described the shifting strut is closely approaching its position of maximum wedging force while safely retaining sufficient leeway for further shifting.

As the wind force vibrates or sways the mast 4 with the latter then tending to move downwardly the shifting strut tends to further shift towards its position of maximum leverage or wedging action, which is, of course, just as the strut approaches full right angularity with the mast. Therefore, there is a continuous effect of tightening throughout the life of the device and combination, as contrasted to the loosening action of the average installation intended for the same purpose.

I claim:

A mount for a radio antenna and the like, the mount including in combination a building structure having an open-topped passage, a mast inserted longitudinally in said passage a substantial distance against a portion of the passage's side and projecting above the passage's top and providing thereabove a portion adapted to support the antenna, and a shifting strut having one end engaging said mast in said passage oppositely to the passage's said side portion and extending from the mast at a downward inclination to a diametrically opposite portion of the passage's side and having an end engaging the passage's said opposite side portion, said strut comprising two sections and adjustable means for holding these sections together, the sections being constructed and arranged so that the effective length of the strut may be varied adjustably, and the strut's said ends comprising a saddle engaging said mast and having means pivotally connecting it to the strut at the mast-end of the latter and at the other end of the strut the end comprising a toothed shoe gripping the passage's adjacent side, said toothed shoe also, having means pivotally connecting it with the strut.

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