QUICKIE TOWER

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Recently my son W3KYN and I decided that since we liked operating on the ten meter band so well we should have that dream of all city dwelling hams, a beam.

Unfortunately we were faced with the same dilemma most other fellows have that live in a closely knit suburban area, that of space and appearance. Our lot is only 55 feet wide and 115 feet long, with neighbors on both sides as well as behind us. We didn't want any guy wires or unusually heavy supports, but still we wanted to have a beam at a reasonably good height for effectiveness while retaining good looks and low cost. We didn't want the beam to be too far from the house in order to reduce the length of the feed and control lines. Also, on orders from the xyl, "No beams on the house."

Sounds like quite a task, doesnt' it? Well, the following will be a short summation of our efforts.

The beam we selected was a Cush-Craft 3 element job with a boom length of 10 feet and the longest element 17 feet 2 inches with a total weight of about 11 pounds.

We checked around and found that an Alliance rotator, Model U-98 would more than handle the weight as well as give us a directional indicator control for a minimum cost.

We had the beam—now to get something to put it up on!!!

We secured some 2 x 4's and made a saddle support as shown in fig. 1.

We then dug a hole in the ground deep and wide enough to bury a regular sized wooden barrel one foot below the level of the lawn. Then we took the 2 x 4 assembly, temporarily guyed it plumb, and filled the barrel with dampened dirt, tamping frequently to assure solidity around the mast. We did this until the barrel was full to the top. Then we nailed 3 feet long cross pieces on the mast, resting along the top edge of the barrel as well as reaching out over onto solid ground, and then covered the whole thing with dirt and tamping as we went along. We then removed the guys, and by golly we had a really strong, rigid and neat looking mast.

We then took a 20 feet long length of 1¼″ pipe, reduced it to 1″ and added on a 5 feet length of 1″ pipe. At a point approximately 7 feet from the end of the 1¼″ pipe, we drilled a ⅝″ hole and at a point approximately 7 feet up on the 2 x 4's we drilled a ⅝″ hole straight through. Then, after lifting the pipe in place, we passed a ⅝″ bolt completely through and secured it.

After raising the far end of the pipe mast onto a 6′ ladder, we attached the rotator and beam and control lines. After the "meat" end of the assembly was completed, three of us, by pulling down on the extending 7′ length of the mast very easily swiveled the mast up in the air and drove the pipe in between the 2 x 4's. We drilled a ¼″ hole at the base of the assembly about two feet from the ground and passed through a ¼″ bolt and bolted the whole business into place.

So far this setup has withstood moderate winds without guying of any kind and has just a perceptible amount of swaying.

It has a nice clean cut appearance and so far has drawn no objections from either the neighbors or—and this is important—the xyl !!! And —so far, no TVI. ■

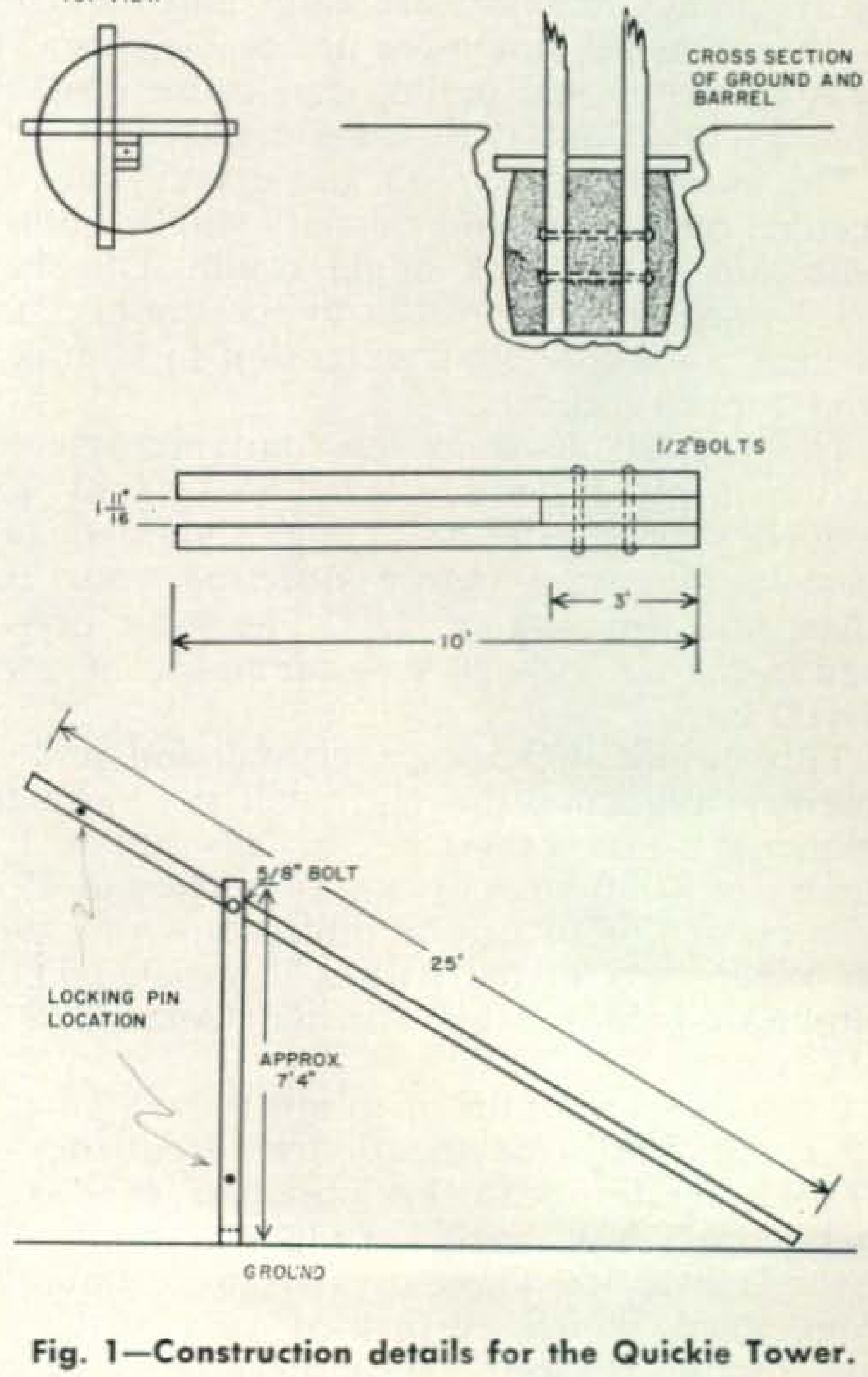
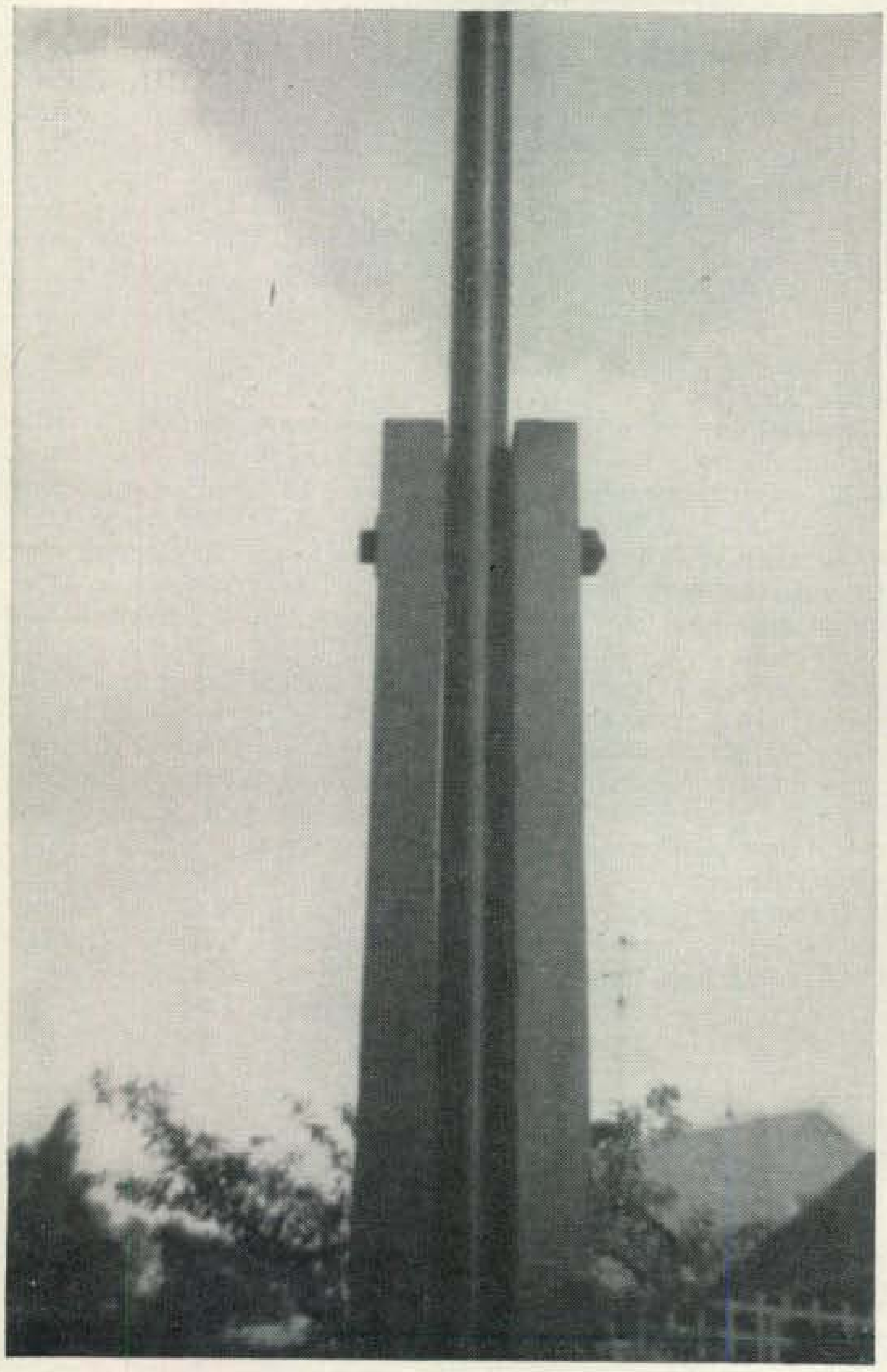
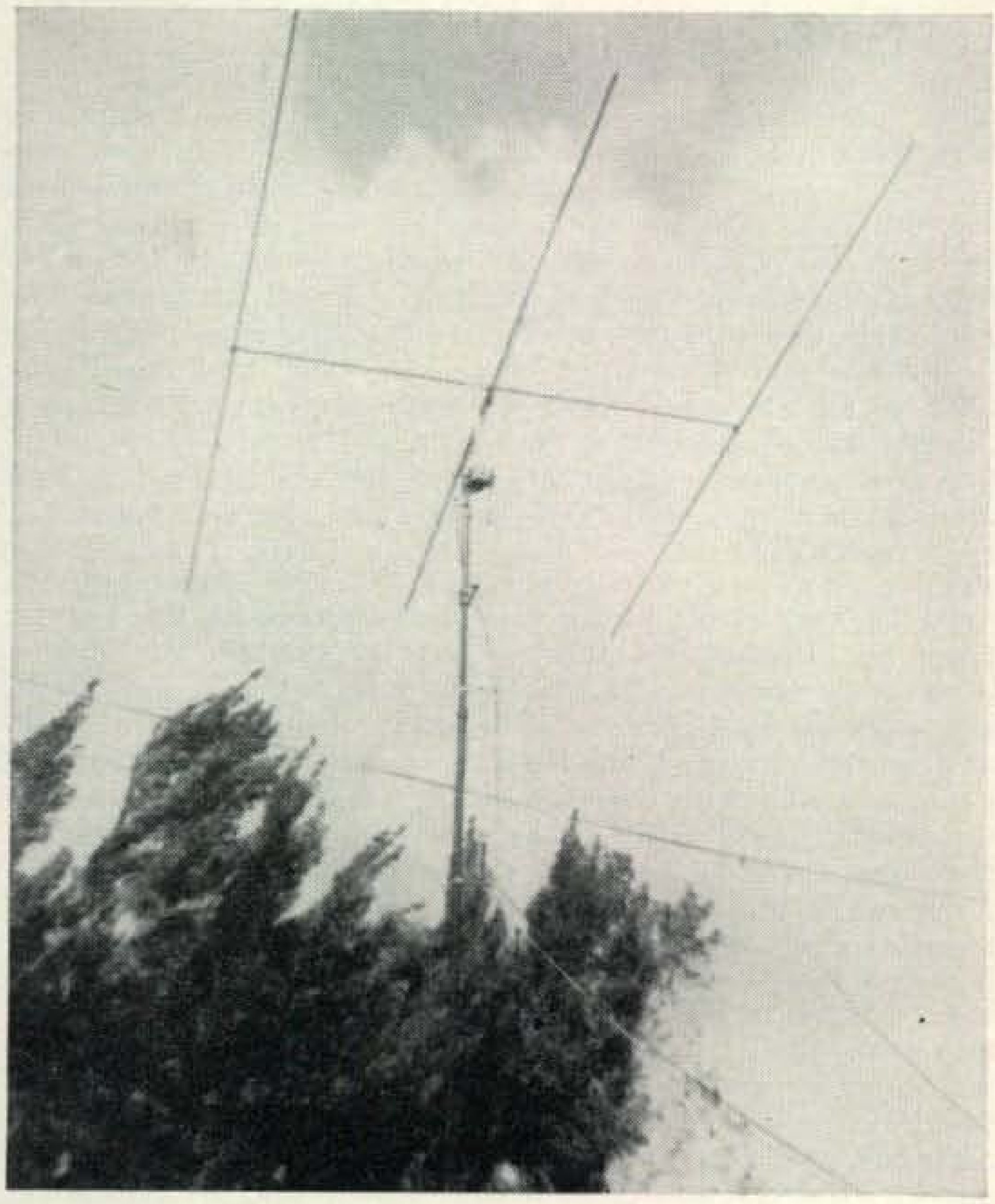


Fig. 1—Construction details for the Quickie Tower.





TRAPS [*from page 51*]

the trap at the TV set.

Hook one end to the set's terminals in parallel with the present antenna lead, and enlist an accomplice to operate your station.

With the beam turned to present the most interference, start trimming off the free end of the trap to get as clean a picture as possible.

Warning—go slow with the trimming! Steps of about ⅛ inch at a time are about right. And watch out for effects of hand capacity. Take a bit off, drape the lead behind the set, check the picture, then take another bite if it needs it.

Anyhow, you'll probably trim ⅛ inch too much off before finding out you had it right. That won't make much difference, though.

Reception of fringe-area TV signals is not affected by the trap, which tunes sharply to your frequency, give or take a few kilocycles.

This feature, plus the lack of having to tear into the set itself—which the TV owner understandably might object to—makes the trap a perfect solution to the problem.

Simple, no? Inexpensive, quick, but priceless in building a good-neighbor policy and continuing your own existence as a ham–Try it, and we'll see you on six. ■

This system works fine. For two meters I use 16½" of twinlead. See editorial, July, 1956, page 12.

60 KC. [*from page 51*]

precisely measure the time between events which happen in relatively short intervals, for example, in measuring the velocity of rapidly moving waves or objects.

Several investigators, among them Professor J. A. Pierce at Harvard University, have shown that for frequencies below 100 kc/s and for distances of 5000 km and greater it requires only about 10 minutes to compare local frequencies with standard frequency transmissions to within 1 part in 10^9. This is an improvement of more than 100 over what can be obtained at HF. Professor Pierce has carefully determined that a high-accuracy standard frequency service can be given for all the world on a single very low frequency from a single high-power transmitting station.[1]

The experimental broadcast on 60 kc, although on low power, has already presented several intriguing possibilities. With the cooperation of Professor Pierce, it has been possible to compare the NBS primary frequency standard, broadcast on 60 kc, with the British standard which is broadcast on 16 kc and 60 kc, to an accuracy of comparison which is better than two parts in one billion. This has been done almost continuously since the broadcasts began last July. Regular measurements on the 60 kc broadcasts are now being made by several organizations in the eastern United States.

The most challenging project will be an attempt to compare the Boulder Laboratories' atomic-frequency standard which is much more stable than 1 part in 10^9 with those in England and elsewhere. This will be undertaken as soon as possible. It is estimated that an accuracy of comparison of better than one part in one billion can be attained.

Tests with the experimental low-frequency standard broadcast will provide information not only on the ultimate stability of the received waves, but on possible ways of improving the standard frequency broadcast services. A high-power VLF station would be very expensive but probably less so than a network of HF or VHF stations which would be needed to give a frequency and phase standard of high accuracy at all times and places on the earth. ■

[1] Intercontinental Frequency Comparison by VLF Radio Transmission, (Proc. IRE, Special VLF issue to be published in 1957).