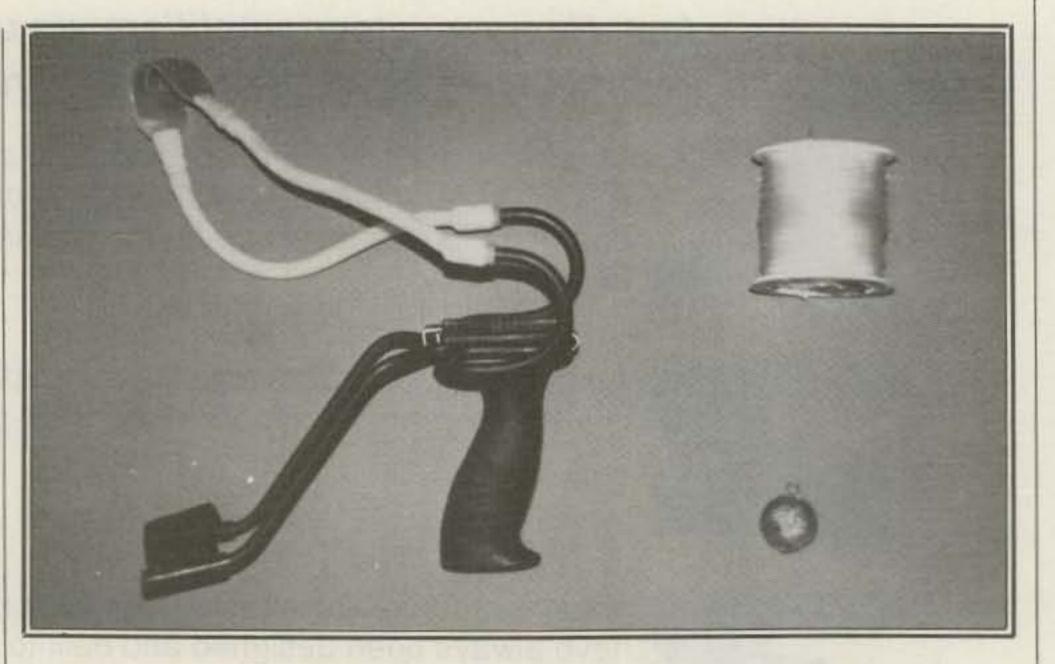
Look out William Tell! A little target practice is in order so that you can aim your antenna at those DX targets.

## Wire Antennas and Trees The Easy Way

BY HARRY M. JOHNSON\*, NV7K, and C.A. JUSTINAK†, W7GBI

When spring and summer roll around again, many amateurs will look to the trees for antenna support. These natural wonders can make great substitutes for towers if they can be taken advantage of. The old trick of using a slingshot, bow and arrows, etc., to put a line through a tree at the proper place has been used many times, but there are several places where difficulty can occur. The proven procedures presented here will help to minimize the difficulty.

This method uses a minimal amount of time and equipment and has given us good results. The idea is to shoot a 20 pound test nylon monofilament line through the appropriate place in the tree so that an intermediate pulling line or the final antenna rope can be pulled back through. A commercially available slingshot, such as the one made by Saunders (see photo) and available in sporting-goods stores, is ideal for the job. A 2 ounce oval fishing sinker was used by the authors, but a regular swivel type can be used as long as the weight is the same. A stevedore knot, used often with fishing gear, is used to attach the line to the sinker. A square knot with a half-hitch can also be used.



In the following procedure an assistant can handle the line. However, if no one is available, it may be done as follows.

The line spool is slipped on to a ¼ inch steel rod (or suitable substitute) about 12 inches long. The rod is clamped to the top of a sawhorse with vise-grip-type pliers. A second vise grip is used to keep the spool from spinning off the end of the rod as the line runs out (see photo). It is advisable to strip off about 20 feet of line and carefully lay it out on the ground between the sawhorse and the target. This allows the pro-

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Clockwise from left, Saunders slingshot, 300 yard spool of 20 pound test nylon monofilament line and 2 ounce oval fishing sinker.

jectile to gain enough momentum to strip line off the spool as the 20 feet is extended out toward the target.

Just a few comments are in order about placement of the sawhorse and line spool, which must be done before the first shot is fired. We place the sawhorse back from the base of the tree at a distance approximately equal to the height we're shooting for. We stand to the left of and slightly in front of the sawhorse with the drawn-out line to our right and slightly in front of us.

There are many ways to aim with a slingshot and a few practice shots will show you where yours shoots. It might be wise to practice before attempting to shoot a line through a tree. We hold the slingshot in the left hand and use the right to draw it back. We sight over the left side rubber attachment while the slingshot is canted about 45 degrees to the right. Full draw is usually required to place a line at

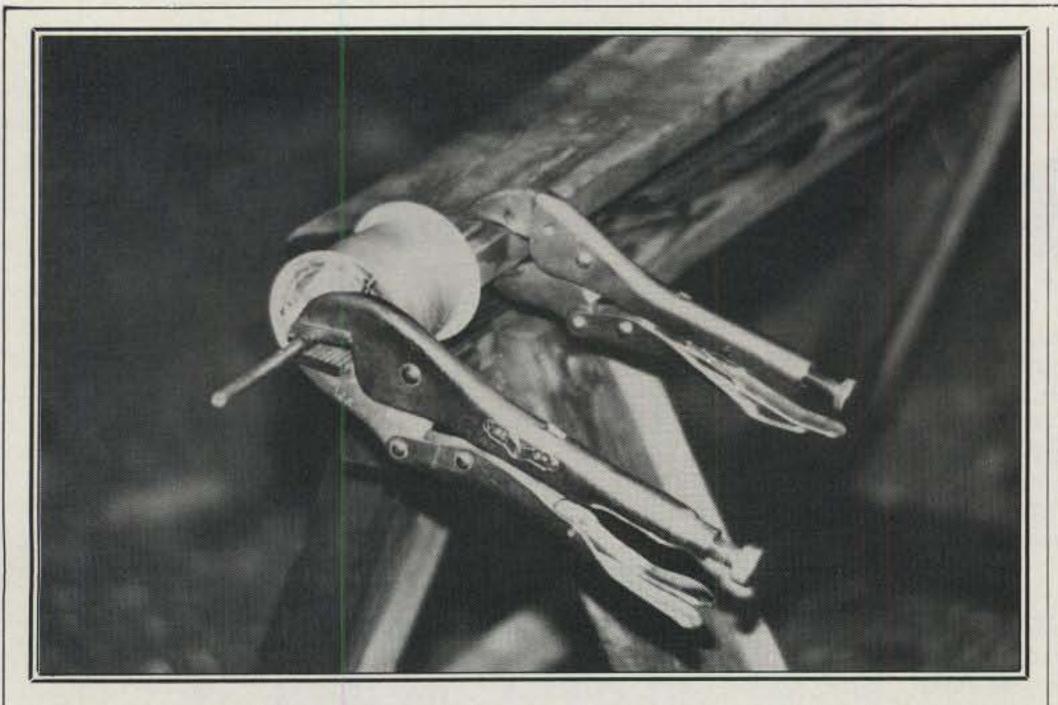
about 60 feet elevation in an evergreen tree such as a douglas fir or ponderosa pine.

Upon release of the projectile, follow through with the slingshot down to your left (or right) side to keep it clear of the line.

After a bit of experience you'll probably find yourself hitting just the right place on the first shot. If things are carefully set up in advance, sinker well tied, line carefully stripped out, and sawhorse correctly placed, the shooting is just the easiest part.

The sinker will usually fall to the ground on the other side of the tree of its own weight. Rarely, it will land on a large branch and require you to grasp the line and raise the sinker slightly and let it fall. It can be coaxed around any obstructions and will then drop cleanly to the ground.

There are many ways of securing antennas to trees (pulleys, weights, springs,



Line spool runs on 1/4 inch steel rod held to sawhorse by vise grips. Second pair of vise grips keeps spool from spinning off as line goes out.

etc.) and we won't cover them here. We will present a foolproof way of getting the rope you are using up over the branch and down the other side.

Cut the sinker from the monofilament shooting line and put it in your pocket so it won't get lost. Take your rope and tie a

half hitch about 1 inch from the end. Pass the end of the monofilament through the half hitch and wrap about three turns around the rope. Tie it off with a square knot and a half hitch on top to ensure against slippage. Take a roll of black vinyl electrical tape, begin at the trailing por-

tion of the rope-monofilament junction, and tape it tightly and smoothly over the knots much as an electrician tapes a bundle of wires before pulling through conduit. The idea is to allow the smooth passage of the rope-monofilament junction over the branch that will ultimately support it (and any other branches along the way).

You can then go back to the sawhorse and begin pulling in the monofilament line to raise the rope up and over your selected branch. Be sure your rope runs free of kinks and twists and handle the monofilament by spinning the spool to reel it in. If you handle it in your hands, wear gloves! There is enough weight provided by the rope to cause the monofilament to cut into tender finger flesh!

One further note at this point. If you are attempting to place heavy rope, such as 1/4 inch or larger, in the tree, we would advise pulling a nylon string like mason's line through the tree first and then using it to pull your rope. This eliminates the possibility of breaking or severely stressing the monofilament. Use the same method of attachment with taping as described above for monofilament-to-mason's line and mason's-line-to-rope.

So there you have it! The way you use it and the type of antenna you are erecting are up to you, but we think you will find this a foolproof way to get it up to a good workable height in your available trees.





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