

Here's an afternoon project that will make your drive time happier. You can also use it to compare traffic jams across the country with other 15 meter mobilers.

How To Build a Quick and Easy 15 Meter QRP Mobile Antenna

BY LOUIS J. JACOBS, JR.*, KN9V

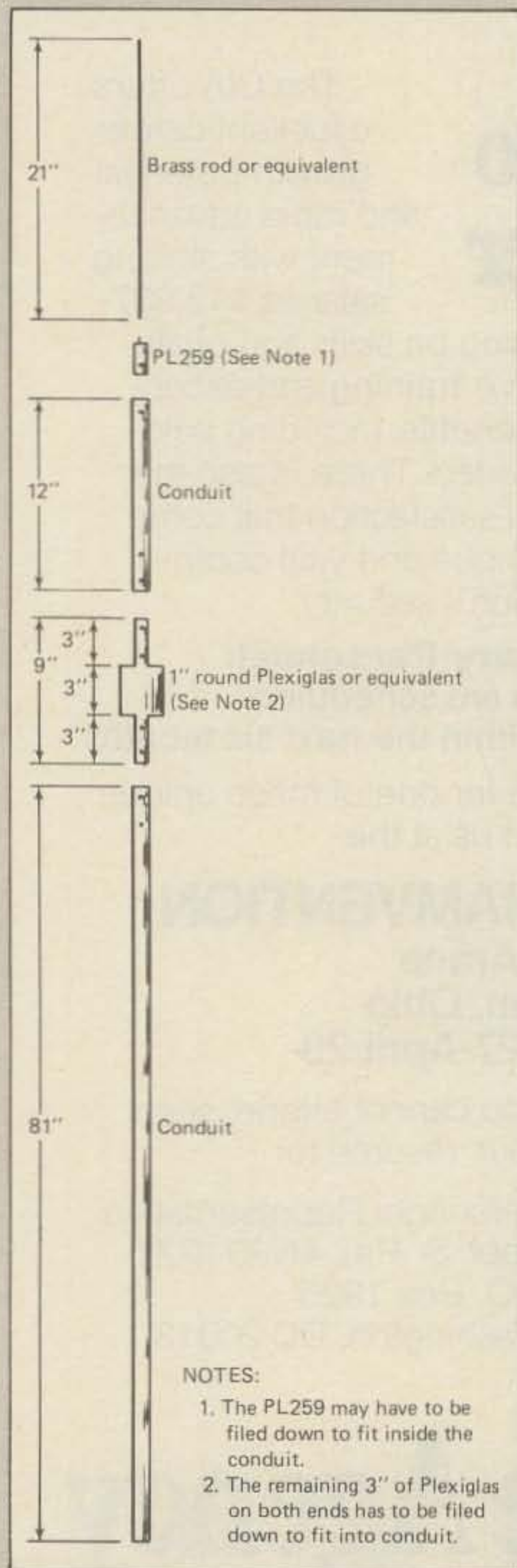


Fig. 1— Overall dimensions for the 15 meter mobile antenna.

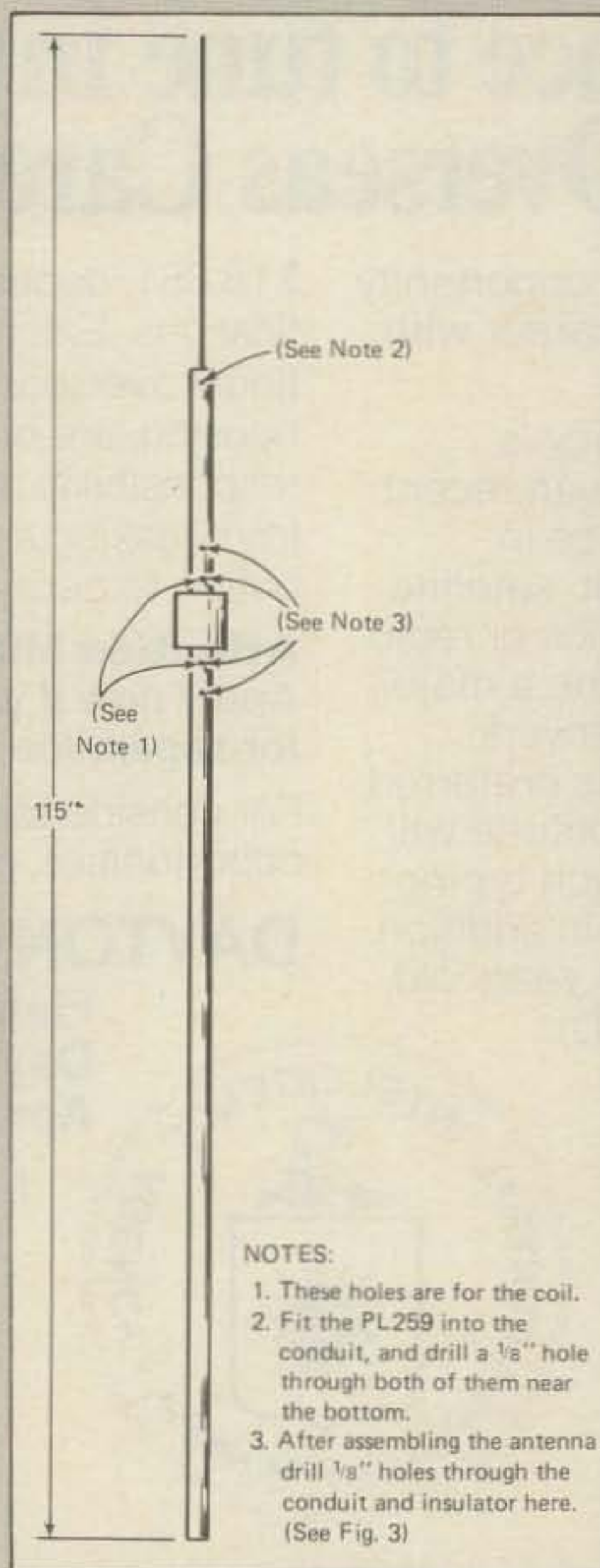


Fig. 2— The assembled vertical antenna for 15 meters.



The completed bumper mount on the author's pickup truck.

Time spent driving to and from work is time away from the shack, which led me to the thought of running mobile. Being an amateur, and admittedly a frugal one, the thought of buying a commercial antenna just didn't sit right with me.

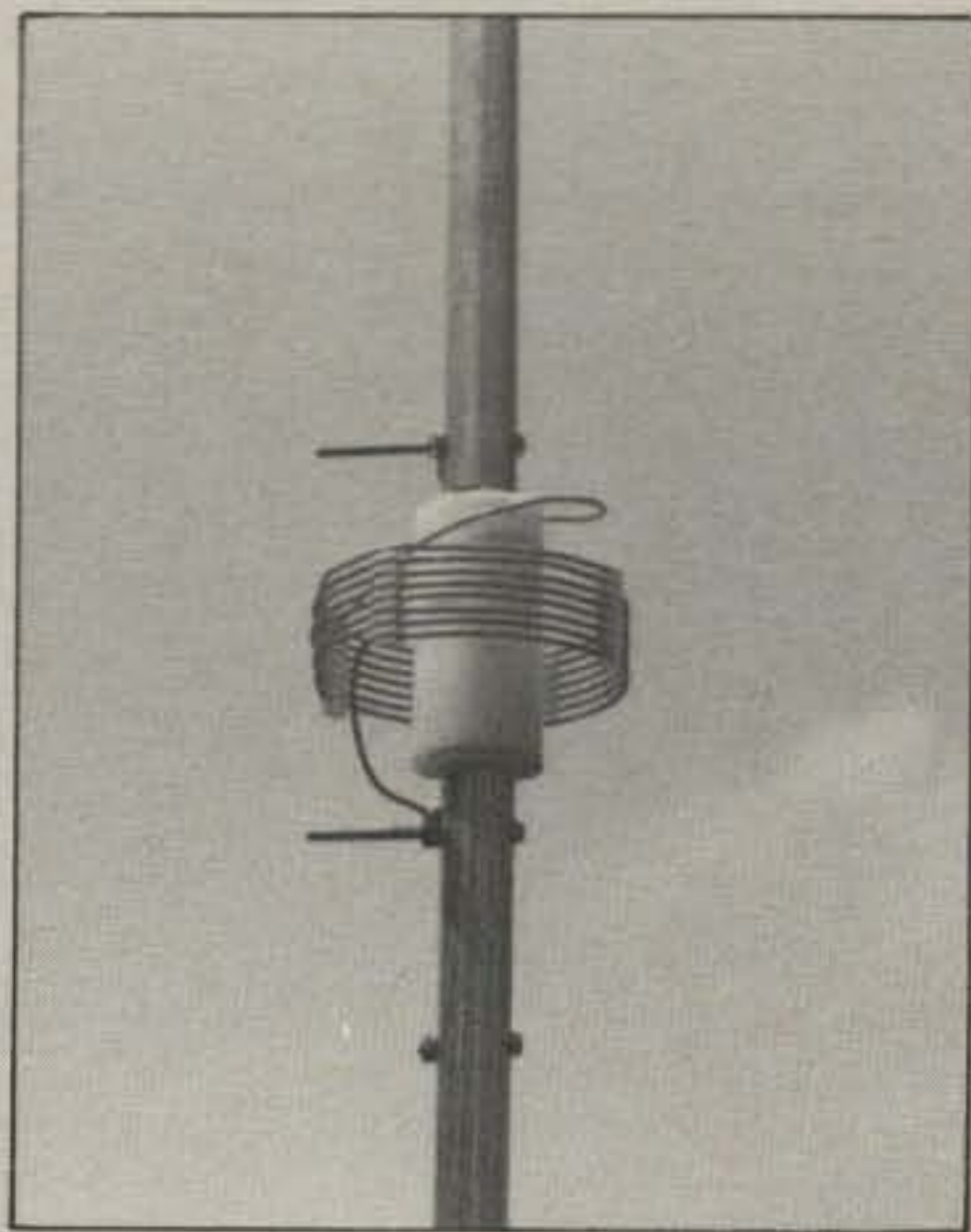
My major interest lies in QRPing, and I was anxious to try my new NCG 15 meter QRP rig while on the road. The only obstacle was the antenna. Where does one get a cheap, efficient, easily built antenna? Well, a trip to the junkbox, the basement, and the local hardware store resulted in this 15 meter QRP mobile antenna.

Before getting into the construction, I would like to say that it works well with a

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The conduit is held in place by conduit clips as shown.



The center loading coil as described in the text.

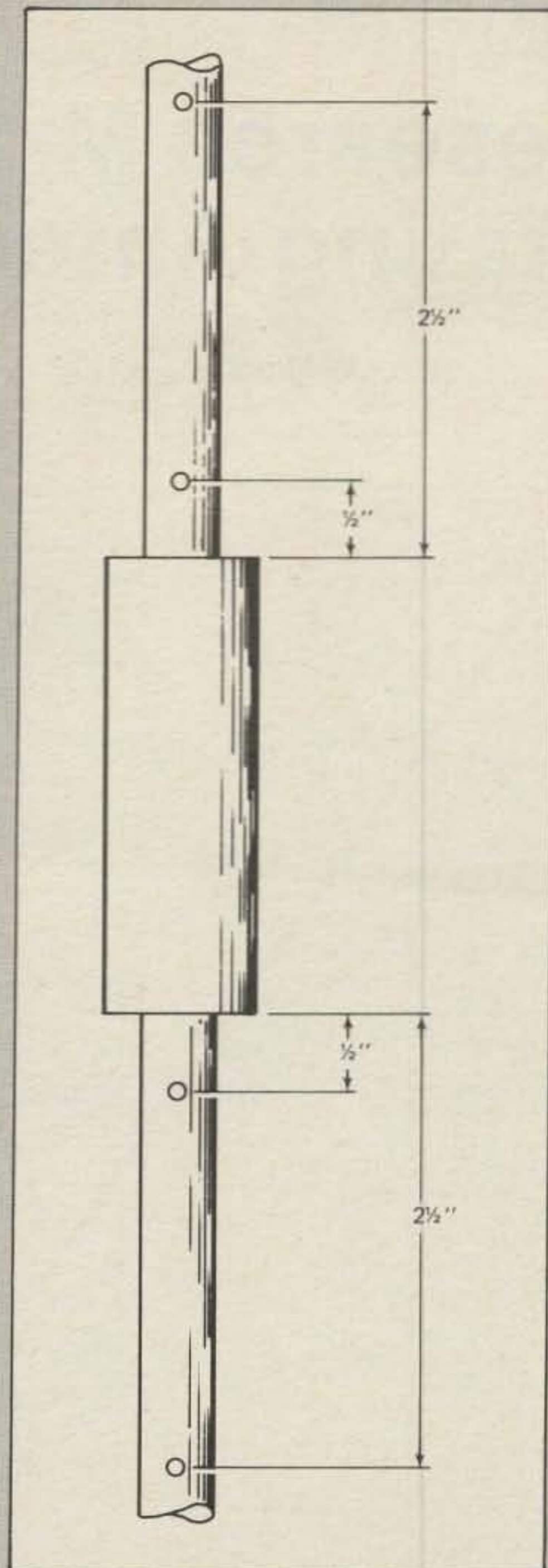
low s.w.r. of 1.3:1 over the 15 meter band using 10 watts of input power. The antenna hasn't been tried with more power because as mentioned before it was designed with QRP in mind.

The antenna was constructed from 1/2 inch thin-wall conduit from the hardware store. The center loading coil is a piece of 3/4 inch diameter B&W stock from the junkbox. The inductor can be hand-wound using approximately 18-gauge wire. The top section is a piece of 19 1/4 inch whip from an old 11 meter antenna. The base mounting insulator was fabricated from an old piece of 1/2 inch thick plexiglass.


The accompanying diagrams and photos give all the necessary measurements and information pertinent to the construction of the antenna.

The antenna was field tested and the

Fig. 3- Drilling dimensions for mounting the insulator to the conduit.



results are as follows. Using 10 watts with the antenna mounted to the rear bumper of my pickup truck the stations worked were Fort Worth, Texas; Picorivera, California; Richmond, Virginia; Hendersonville, North Carolina; and Milville, New Jersey. The signal reports on single side-band ranged from 5-1 to 5-7 and on c.w. from 519 to 579. I was well pleased with the antenna's performance and the signal reports considering the poor band conditions we've been having lately.

After consulting several handbooks and being thoroughly confused by conflicting statements, I decided to utilize a few facts and apply the old scientific principle of "trial and error." That is how I came up with this cookbook, 15 meter mobile QRP, homebrew, cheap, efficient, effective, easy, and fun-to-make antenna. 

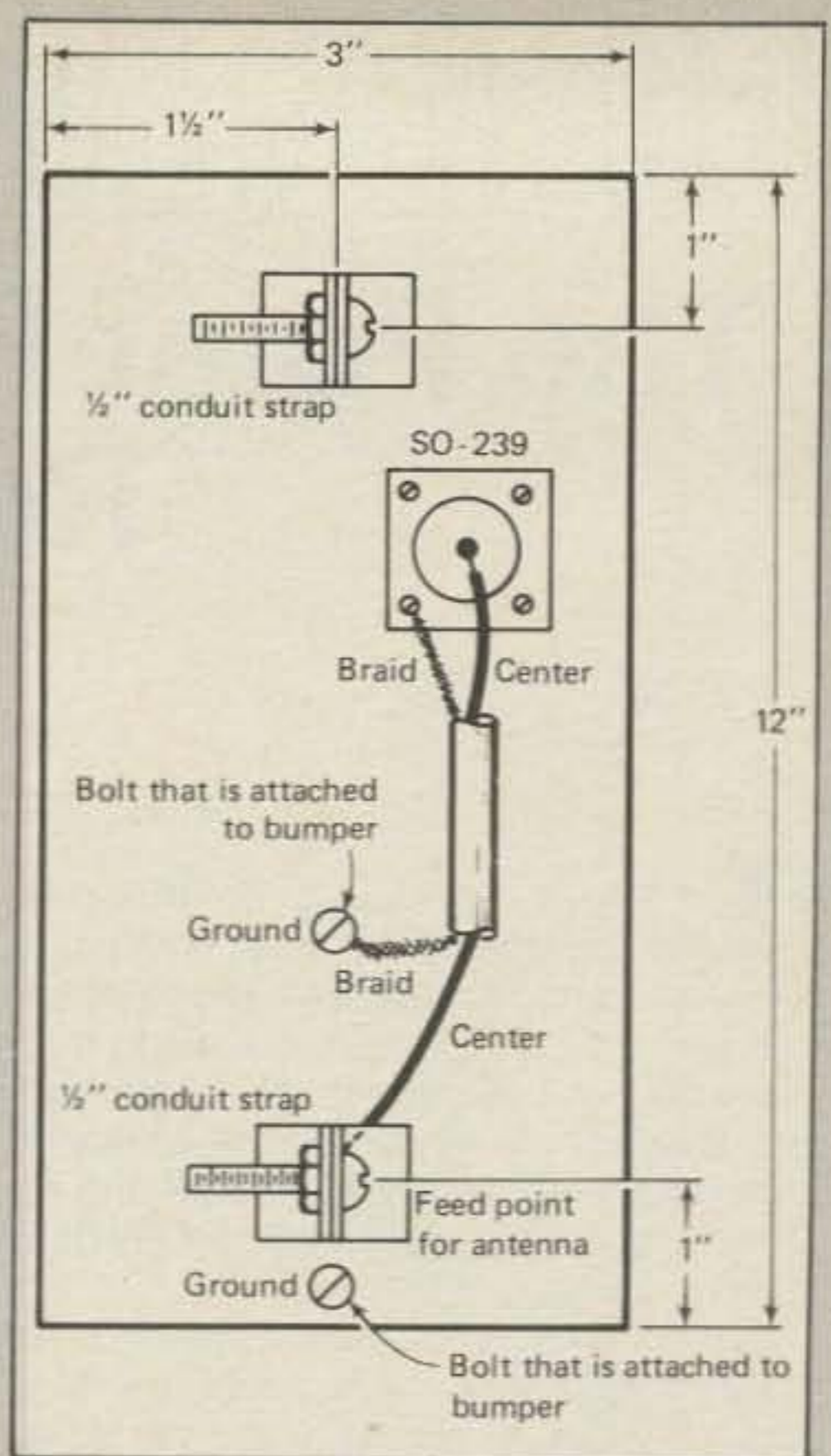


Fig. 4- The bumper mount is made of 1/2" plexiglass, 12" x 3", laid out as above.

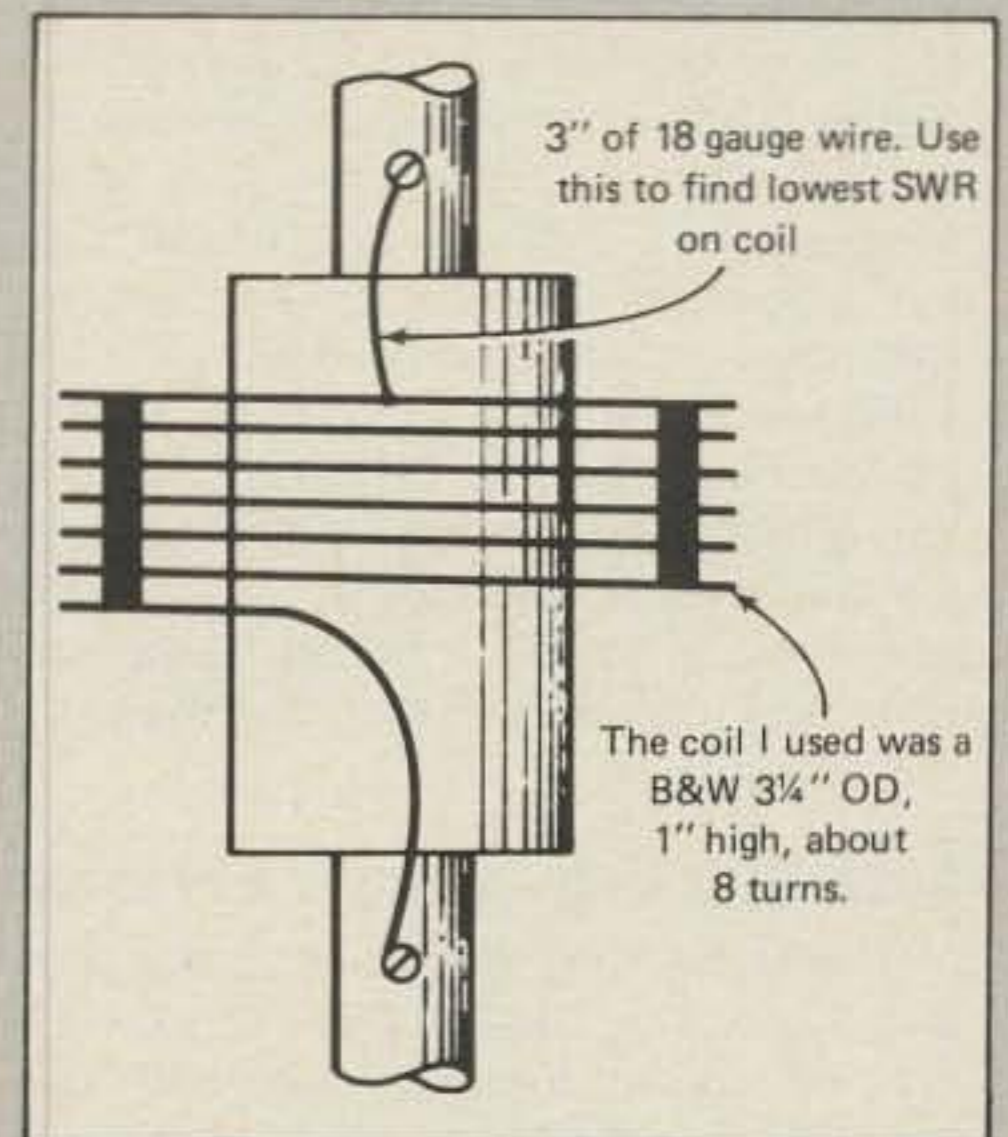


Fig. 5- The coil assembly.

Parts List

- 1 - 10' x 1/2" thin-wall conduit
- 5 - 1/8 x 3/4" machine nuts and bolts
- 1 - 1" roundstock plexiglass 9" long or any other insulating material
- 1 - 3/4" B&W air inductor 1" high
- 1 - antenna whip
- 1 - SO-239 chassis connector
- 1 - coax cable, length as needed
- 1 - plexiglass 1/2" x 3" x 12" or any suitable size
- 2 - conduit pipe straps for 1/2" conduit
- 2 - Large nuts, bolts, and lock washers for mounting insulator to bumper