separation, 90° to each other. The apex of my antenna is at a height of 65 feet (20 meters), and the legs all come down at about a 45° angle. In addition, there seem to be no directional effects with this antenna. — *Tim Cotton, N4UM, Plantation, Florida*

[Editor's Note: See a related article by Lawson, Nov. 1970 *QST*, p. 17.]

GASOLINE-ENGINE POWER SUPPLY

☐ When Dwight and Ann Mueller were planning to spend a year in the Alaskan wilderness, they needed a small, portable power supply.[4] Dwight built a gasoline-engine-powered unit that included a 12-V automobile alternator and a 2500-W, 117-V alternator (Fig. 3).

A 5-hp engine is used to drive either the 12-V or the 117-V alternator. The pulley sizes are the same on the engine and both alternators. Full output from the 117-V unit was achieved at 3500 rev/min, and at a slightly slower speed for the 12-V alternator. Both alternators were never driven simultaneously, but this should be possible if a slightly larger pulley is used on the 12-V unit so it can be run somewhat slower than the 117-V alternator. A larger engine may be needed if both alternators are to be driven at once, but a smaller one would be sufficient to run only a 12-V alternator.

Fig. 4 shows how this device can be wired with an automotive voltage regulator to maintain the charge on a 12-V battery. The Muellers' installation had meters and a battery inside the cabin. Large gauge wire must be used between the alternator and battery. — *Roger Barnard, WA0HAM, Mercer Island, Washington*

[4]R. Barnard, "An Alaskan Adventure," *QST*, March 1982, pp. 54-55.

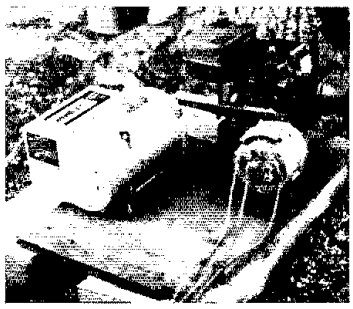

Fig. 3 — Photo of a gasoline-engine power supply for 117-V ac and 12-V dc.

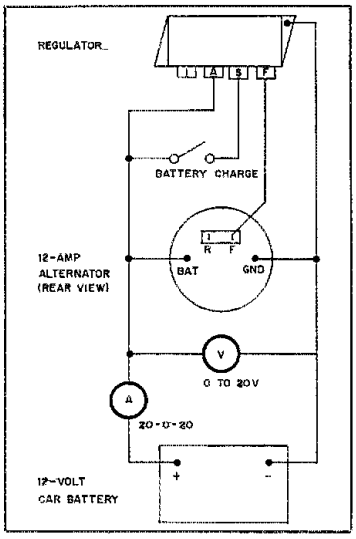

Fig. 4 — Sketch of the connections used to maintain the charge on a 12-V battery. The battery can be used to power a small transceiver and even some 12-V lamps for reading.

INDOOR-ANTENNA SUPPORT

☐ After moving to an apartment that has a restriction against outside antennas, I decided to try my 2-meter beam indoors. I mounted the antenna on a wooden pole, and fastened the pole in a Christmas-tree stand. This provides a sturdy, small, portable support. The results from my second-floor apartment are gratifying. My "armstrong" rotator easily points the beam in any direction, and stands the antenna flush with the wall and out of the way when not in use. — *David J. Tomaszek, WD4CBZ, Hialeah, Florida*

A 2-METER J BEAM WITH TRIGONAL REFLECTOR

☐ This antenna was developed as a combination of ideas from two previous *QST* articles.[5,6] I wanted a beam antenna with vertical polarization, and I wanted to avoid the problems of fastening a conventional Yagi type of antenna directly to the metal mast above my tribander.

The vertical J-driven radiator (and boom-support piece) is constructed from odd lengths of 3/4-in. conduit that I welded together.[7] The matching stub is welded to the radiator by means of a bracket formed from scrap iron. I use a radiator that is more than 7 feet long, but any additional length below the stub (58 inches from the top) raises the antenna higher above the mast. The main boom is made of 3/4-in. PVC pipe, and the secondary boom is 1/2-in. PVC pipe. The directors and reflectors can be copper tubing, aluminum rods, hard-drawn copper wire or any similar material. Fig. 5 gives dimensions and construction information.

I found the best feed point by trial and error, using an SWR indicator. The coaxial-cable center conductor and shield were attached to the radiator and the matching stub. The points of attachment were moved up and down until the lowest SWR reading was obtained. These adjustments were made at ground level.

With the beam mounted on my tower, I was able to access a repeater about 50 miles away. The signal received from the repeater almost pinned the S meter. Access had been impossible with a 1/4-λ vertical at the same height. I am very pleased with the results from this antenna. — *Jack Ratzlaff, VE7DDS/VE5, Regina, Saskatchewan*

[5]J. McDonald, "A J-Driven 2-Meter Beam Antenna," *QST*, Nov. 1979, p. 32.
[6]V. Quaresima, "A Tri-Yagi for 50 MHz, *QST*, June 1980, pp. 14-15.
[7]mm = inches × 25.4.
m = feet × 0.3048.
km = miles × 1.6.

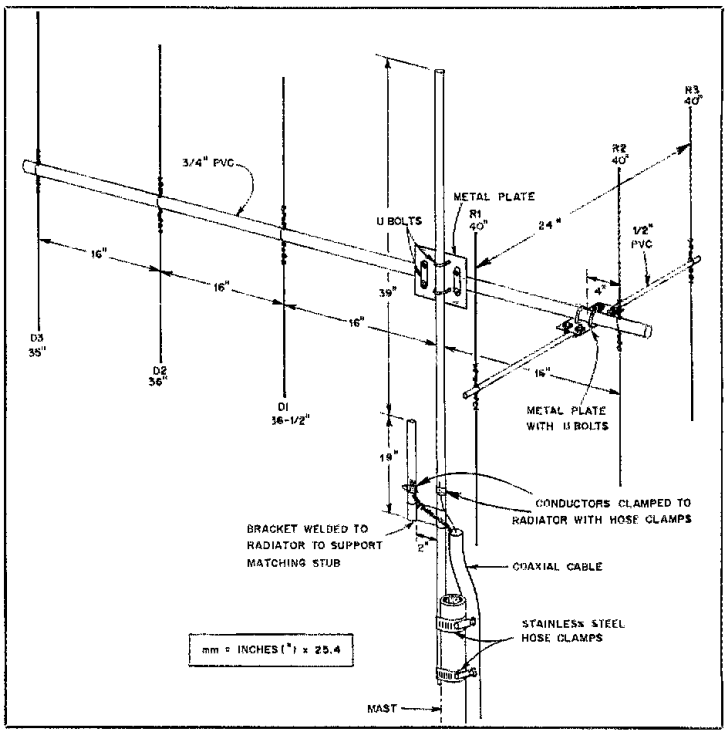

Fig. 5 — Dimensions and construction details are shown for a 2-meter J beam using a trigonal reflector.