HINTS AND KINKS FOR THE EXPERIMENTER

AMPLIFIER NEUTRALIZING WITH SAFETY

FIG. 1 shows an arrangement I have been using successfully for some time in neutralizing amplifiers equipped with link output coupling. A flashlight bulb is simply connected across the link and the neutralizing condensers adjusted for no indication, or minimum indication. This system has the advantages over the neon-bulb method that it does not unbalance the circuit and that it is entirely safe in operation.

If coupling to the output coil is variable, the most-sensitive bulb available should be used,

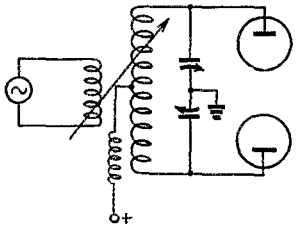

Fig. 1 — W8RBL uses a flashlight bulb connected to variable link for safe neutralizing.

starting with very loose coupling and increasing the coupling as the point of neutralization is approached. With fixed links, start with a less-sensitive bulb and finish up with the sensitive one. — *R. E. Span, W8RBL.*

FOLDED ANTENNA FOR 160

THE 160-meter 'phone station of W6QVP, fixed-portable at Merced, California, has had to handle a situation which confronts many amateurs operating on 160, namely, the lack of sufficient room for a good half-wave antenna. Faced with this difficulty, the usual response is to put up a piece of wire "about so long and so high," then worry about tuning equipment to make it resonate.

For this station, however, there are several definite reasons why a Marconi end-fed type was not looked on with favor. Some of them are: Too much b.c. interference; loss of power in antenna-tuning equipment; expense of purchasing new antenna-tuning apparatus (we had none so it would mean laying out cash); difficulty of being sure the power input was actually getting to the antenna and, finally, the main reason which was

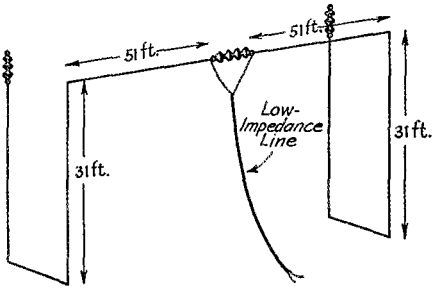

Fig. 2 — Good results have been obtained by W6QVP with this folded 160-meter doublet.

that with a Marconi the current node is at ground point, while with a doublet-type antenna it is at the center of the system. Hence, it was obvious that, lacking tuning equipment, having two b.c. receivers directly under the antenna and wanting the utmost efficiency for our 85 watts input, we turned to a doublet.

We have two 32-foot "two-by-three" poles, one on the house and the other 105 feet away on the garage. Fifty-one feet of the 239-foot overall antenna length is on each side of the center in horizontal position. Hence, we have a 102-foot flat top. At the top of each pole and raised or lowered right with the antenna, is a three-foot light-wood spreader with insulators on each end. A similar spreader is lightly nailed to the bottom of each pole. The antenna wire is led from the center of the top spreader insulator over to one end of that spreader, thence down 31 feet to the corresponding end of lower spreader, across it, then back to the opposite end of the top again as shown in Fig. 2. This consumes between 66 and 68 feet of antenna equally at each end in a typical approved balancing-out plan described in the ARRL Antenna Book. The theory is that the parallel sections on the ends partially balance out and thus reduce vertical radiation. All wire, of course, is insulated from the wood with glass insulators. Both house and garage here are a few feet above usual height, so our poles get up to about 47 or 48 feet above ground. This receiving location, however, is very bad with regard to noise, which should be taken into account in an appraisal of the following results.

For a period of less than two weeks, our log shows ten stations reporting Q5-S9 plus signals,