

over the end of the roof and grounded at the centre of each end of the barn, as illustrated in Figure 5. This saves a little in the length of the cable, but is generally a little harder to staple. Another advantage of grounding at the corners is that there the rain gets the best chance to moisten the earth around the grounds.

The next thing is to figure the materials necessary. The length of cable is computed as follows:

Rise to eaves	24 feet
Eaves to ridge	28 "
Length of barn	75 "
Ridge of eaves	28 "
Eaves to ground	24 "
Ground to ridge (centre ground cable)	49 "
Cable for points	24 "
Cable around cupolas	10 "
Total	256 feet

Staples every two feet call for 120 staples (13 $\frac{1}{4}$ inches), or about two pounds. There will be one galvanized tee for each point and one for the centre ground—six in all—and two set screws for each tee. Allowing ten feet for each copper cable, the three grounds will use thirty feet of cable, or 210 feet of No. 11 wire, using seven strands to make up the cable. This wire weighs a little over .01 pounds per foot, making two and a quarter pounds of copper needed.

Having gotten together the material, the first thing is to run the cable from one corner ground up to the peak, along the ridge, and down the other corner, as shown in Figure 4, stapling it to the building as you go, and not forgetting to slide on the proper number of tees for points and grounds, and putting them at their proper places as the stapling is being done. Then put on the centre ground cable. The conductor being on the building, the points are next in order. If there is a 4 $\times$ 4 post at the end of the roof to support the brace for the end of the hay track, the end point can be stapled up along the side of it. A 3 $\frac{1}{8}$ -inch hole should be bored in the edge of the roof—the cupola and the point passed down through it and fastened into the tee. In passing the cable around the cupola, keep it at the same level as when on the roof. Figure 4 shows a connection with ordinary fence wire from a hay track bolt to the cable where it runs down the first slope of the gambrel roof. This grounds the track, so that if any electricity should come through the roof it would run along the track to the cable and on down to the ground. The eave trough should be in connection with the cable where it passes down over the roof to the side of the building.