

Temporary Splicing of Coaxial Cable

BY HARVEY HUNTER*, W8TYX

DID you ever accidentally stick a spade through your buried coaxial cable? Well, I did with my RG-58/U and rather than replace it at the time, I spliced it. This method is recommended for temporary use only as any form of splice will introduce an impedance "hump" and effect the s.w.r. Taking all this into consideration, here is how to do it.

You will need about a foot of slack to work with. Fortunately, my break was only a few feet from the house, so I was able to pull some slack cable from the house to the place where the break was. If you can't slide the cable in it's trench, you will either have to dig it up or make two splices.

On each end of the break, remove the vinyl outer covering for about three inches (fig. 1a). Then carefully slide back the braid from the cut end of each line for about an inch (fig. 1b). Now cut off about 1/2 inch of the center conductor with the polyethylene covering. Remove the wire from these pieces and save the plastic. Bare the center conductor of each end of the line for about 1/4 inch and bend a small hook in the wire (fig. 1c). Hook the two center conductors together and solder them. Now take the two small pieces

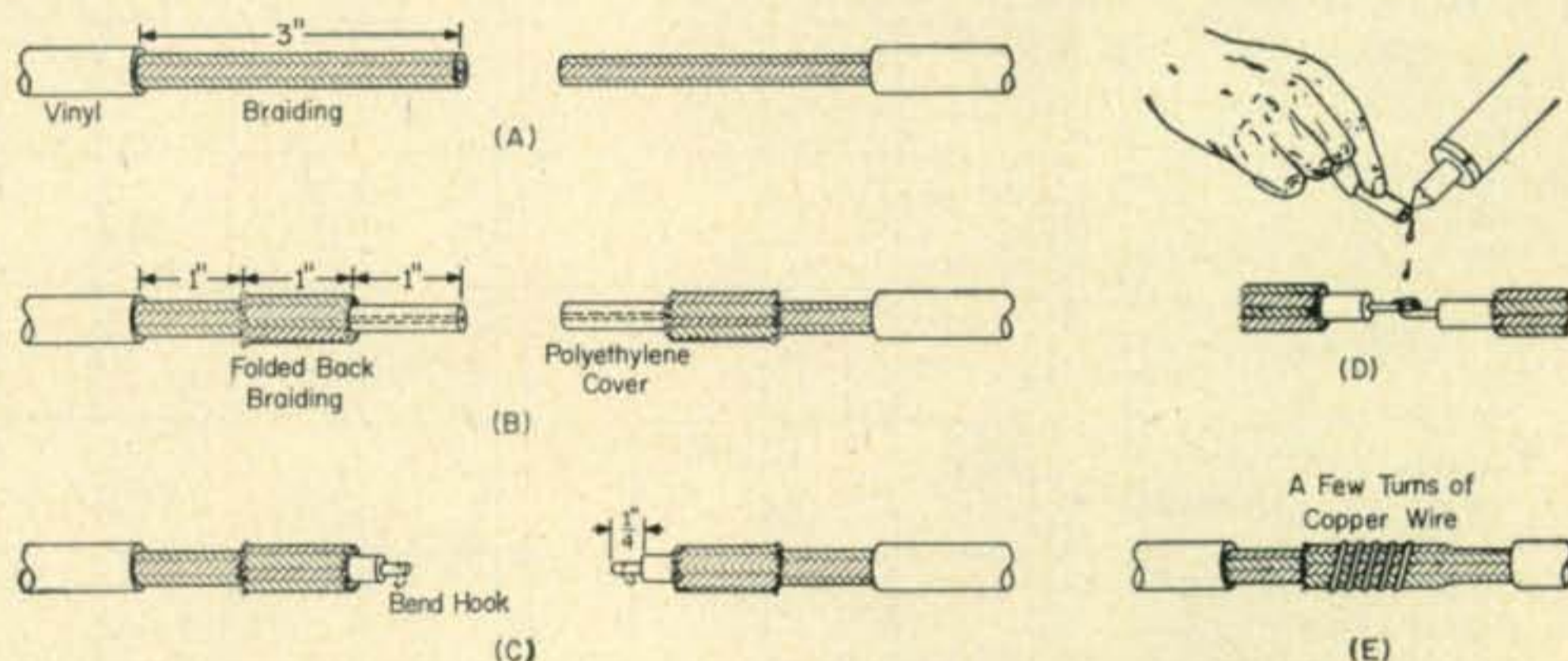
of plastic and using your soldering gun or iron, melt the plastic and flow it over the joint you just made and melt it into the plastic covering the center conductor (fig. 1d). Take it easy here and be sure that you cover the joint completely and fuse the covering you have made into the plastic on the cable. Make your plastic joint about the same diameter as the plastic in the cable.

Now work the outer braid from one side of the splice down over the plastic joint and work the other piece of braid over the first. Smooth the braid down against the plastic and wrap it with a couple of turns of small, bare copper wire to hold it in place while you solder it (fig. 1e). Soldering the braid is the touchiest part of the whole operation. You must have a good electrical connection or the line will not work properly, but you must be careful not to melt the plastic joint and short out the line. I applied soldering paste to the braid and with a good hot soldering gun applied heat and solder just long enough to flow the solder into the braid.

After this, test the line to be sure you haven't shorted it while soldering the braid. If it is all right, finish the job by wrapping the splice with plastic electrical tape. In my case, I reburied the cable, but this splice would be suitable for other types of installations. ■

*1106 Carolyn Ave., Columbus, Ohio

Fig. 1—Step by step method of splicing coaxial cable for temporary repairs. See text for details.



Art Collins Wins Navy Citation

ARTHUR A. Collins, W0CXX, who founded the Collins Radio Company more than 30 years ago in Cedar Rapids, was presented the "Secretary of the Navy's Distinguished Public Service Award Citation" by Vice Admiral Robert Pirie, deputy chief of Naval Operations for Air on March 8th.

The citation signed by Navy Secretary Fred H. Korth cited Mr. Collins as inventor, pioneer and industrialist, who gave "unstintingly of his time and genius in helping the Navy to maintain its leadership in the complex areas of airborne communications, electronic navigation and high speed data transmission."

The long Navy-Collins relationship was highlighted in 1940 when the Navy conducted tests on three competitive transmitters for use on naval aircraft.

The AN/ART-13 designed by Art Collins won the competition.

Collins built 90,000 of these transmitters and some Navy aircraft are still using them today. All services and the British used them during World War II.

Admiral Richard E. Byrd, on his first expedition to the South Pole in the late 20's, was one of the first to recognize the quality of Collins amateur radio gear.