

Simplified Ready-Access Closure For Self-Supporting Cable

News of
Outside Plant
Development

A new, simplified, "ready-access" closure has been developed for connecting drop

wire (the wire between the pole line and a customer's house) to self-supporting cable (RECORD, *October 1964*). The new closure, developed by F. J. Mullin of the Outside Plant Laboratory, accommodates up to four drop wires. It is expected to be used for all small capacity terminal locations in place of the larger, more expensive 49A3 Cable Closure. The latter will be used for large installations.

The new closure has several advantages, the main one being greatly improved telephone plant appearance in residential areas. Appearance is improved by the closure's smaller silhouette and the elimination of the drop wire slack loops. The drop wire enters the closure where the cable does, permitting the wire to be neatly dressed within the cable diameter silhouette.

Access to the cable pairs is obtained by making an 8-inch long window opening about half-way around the cable. Since the self-supporting cable design provides slack in all the conductors, there is no need to remove the entire section of cable sheath in order to locate specific wire pairs in the cable. A bonding harness is installed in order to restore the current carrying capacity of the cable shield across the window opening.

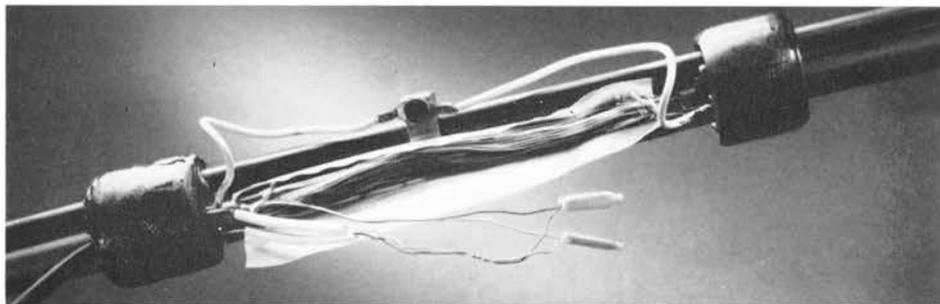
After locating the required pair of conductors, the craftsman connects each conductor to a 10-inch length of 24-gauge wire, called a fuse link. These links, furnished with the closure, protect the drop wire from overheating when accidental applications of high voltage and current occur. The fuse link opens the circuit when subjected to a high current, thus preventing damage to the customer's house from overheated drop wire.

The craftsman connects a fuse link to each conductor with standard "B Wire Connectors" and a hand pressing tool. The other end of the link is equipped with a cylindrical copper/brass solderless connector called a pressed sleeve. The craftsman removes insulation from the end of the drop wire, cleans the wire, inserts it into the pressed sleeve and crimps the connector. A plastic sleeve furnished with the fuse link slips over the connection for insulation.

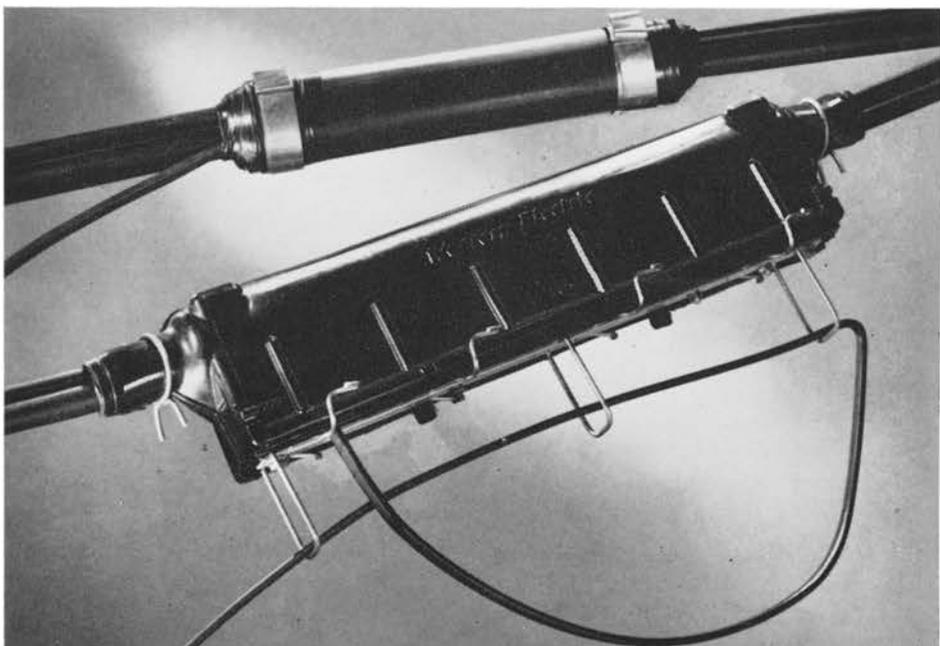
B Sealing Tape, developed for use in splice case seals, is placed around the cable and the drop wire, sealing the ends of the closure against moist-

ure. The craftsman molds the tape against the cable sheath and drop wire for a tight seal. He then places the cover around the collars and seals the joint with vinyl tape. The cover for the closure is polyethylene, wrapped around both the cable and its supporting strand. Removable lashed-cable supports are placed around the cover to hold it in place.

Taking full advantage of the built-in support strand and slack conductors of self-supporting cable, the new closure should bring substantial savings in effort and material to Bell System companies, while improving the appearance of aerial cable plant.



The slack core of the self-supporting cable design makes this simple closure possible. A partial opening of the jacket is sufficient for locating individual wire pairs, which can be connected to the drop wire with standard connectors.



The new ready-access closure (top) is smaller, less expensive, and easier to install than the 49A3 closure. Its size and shape mean that it will be less conspicuous on the pole line, making for better appearance in the outside plant.