

DROP AND BLOCK WIRING

POLE AND GUARD ARM ATTACHMENTS

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1. GENERAL

1.01 This section covers the installation of drive hooks, guard arms, and guard arm hooks, and the methods of running drop wires from guard arms.

1.02 This section is reissued to include information pertaining to the placing of B or C Multiple Drop Wire.

1.03 Since the reissue of this practice covers a general revision, marginal arrows ordinarily used to indicate changes have been omitted.

2. DRIVE HOOKS

INSTALLING DRIVE HOOKS

2.01 Drive hooks should be located on the pole below the cable and strand when the drop wires can be installed with proper clearances above the ground, trees, or foreign wires. With the drive hooks located below the cable on runs to span clamps or on pole-to-pole runs, the drop wires are not as likely to come in contact with the strand and cable.

2.02 Drive hooks may be located above the strand in order to provide proper above-ground clearances of the drop wire if all joint-use clearances are observed.

2.03 Drive hooks may be located both above and below the strand and cable on the same pole, if necessary, to obtain proper clearances for existing conditions. They may be located on the cable side as well as on the face and back of the pole, provided unobstructed climbing space is maintained on joint-use poles.

2.04 When installing a drive hook, hold it with one hand until it has been driven into the pole far enough not to be dislodged if struck a glancing blow with the hammer.

2.05 Stagger the hooks as shown in Fig. 1 when placing more than one drive hook on the same side of the pole. Try to obtain greater than the minimum vertical separation between the hooks, particularly for paralleling drop wires.

2.06 If the diameter of a pole is less than 5 inches, drill a 5/16-inch pilot hole approximately 3 inches deep for the drive hook to avoid splitting the pole. On such poles provide a vertical clearance of about 3 inches between drive hooks installed on opposite sides of the

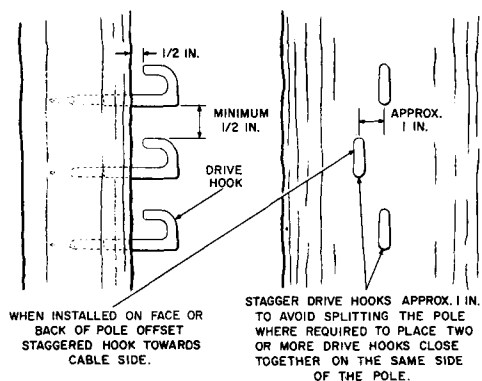


Fig. 1 — Drive Hooks Installed in Pole

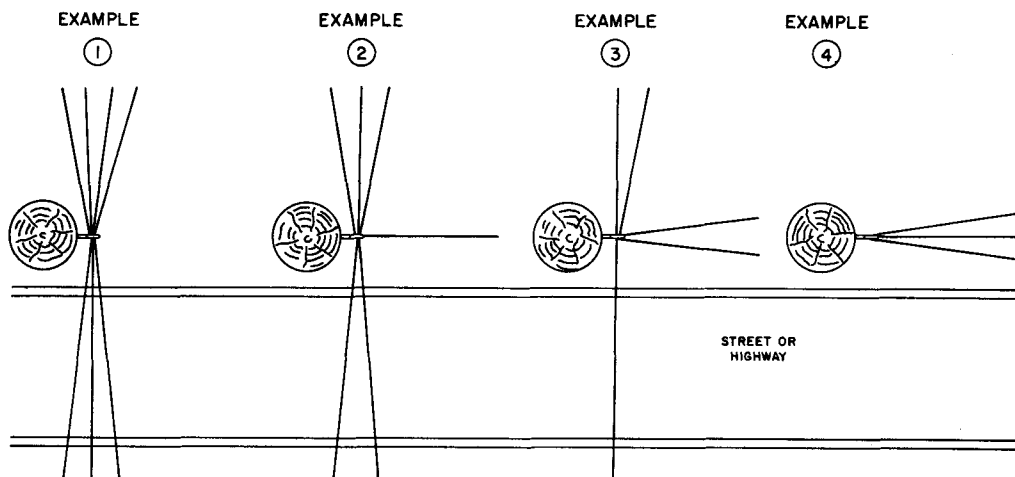


Fig. 2 — Maximum Number of Spans Attached to One Drive Hook

pole. If a drive hook is to be installed near the top of any size pole, it may be necessary to provide a pilot hole to prevent splitting the pole at the top. A pilot hole should be drilled where difficulty is experienced in driving a hook into a hard pole.

CAPACITY OF DRIVE HOOKS

2.07 The maximum number of drop wires or spans of drop wire that may be attached to one drive hook varies according to the direction of the spans and the available space on the hook. When placing B or C Multiple Drop Wire, consider one multiple drop wire equal to three drop wires.

2.08 If one drop wire spans in two different directions from a drive hook placed in the face or back of a pole, the number of attachments that may be made to one drive hook is expressed as the number of spans instead of the number of wires.

2.09 When the drive hook is installed in the face or back of a pole, the maximum number of spans (not wires) that may be attached to a drive hook is shown in Table A and illustrated in Fig. 2.

TABLE A — MAXIMUM NUMBER OF SPANS (NOT WIRES) ALLOWED ON ONE DRIVE HOOK IN FACE OR BACK OF POLE				
EXAMPLE (SEE FIG. 2)	DIRECTION OF SPANS			TOTAL ALLOWABLE SPANS
	PARALLEL- ING POLE LINE	CROSSING HIGHWAY	NOT CROSSING HIGHWAY	
1	0	3	4	7
2	1	2	3	6
3	2	1	2	5
4	3	0	0	3

Example: Referring to the table a maximum of two spans paralleling the pole line, one span crossing a highway, and two spans not crossing a highway (a total of five spans) may be attached to the same drive hook.

2.10 In cases where there is no pull on the pole, where the pull is against the pole, or where the pull away from the pole is less than 4 inches (as defined in Fig. 3), a maximum number of four wires (not spans) may be attached

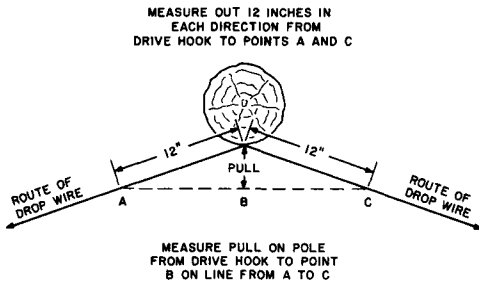


Fig. 3 — Method of Measuring Pull on Pole

to a drive hook installed in the cable side of a pole. Where the pull away from the pole is more than 4 inches, the maximum number is three drop wires.

2.11 A maximum of four drop wires from span clamps may be attached to a drive hook installed in the cable side of a pole.

3. GUARD ARMS

3.01 A properly installed guard arm is shown in Fig. 4.

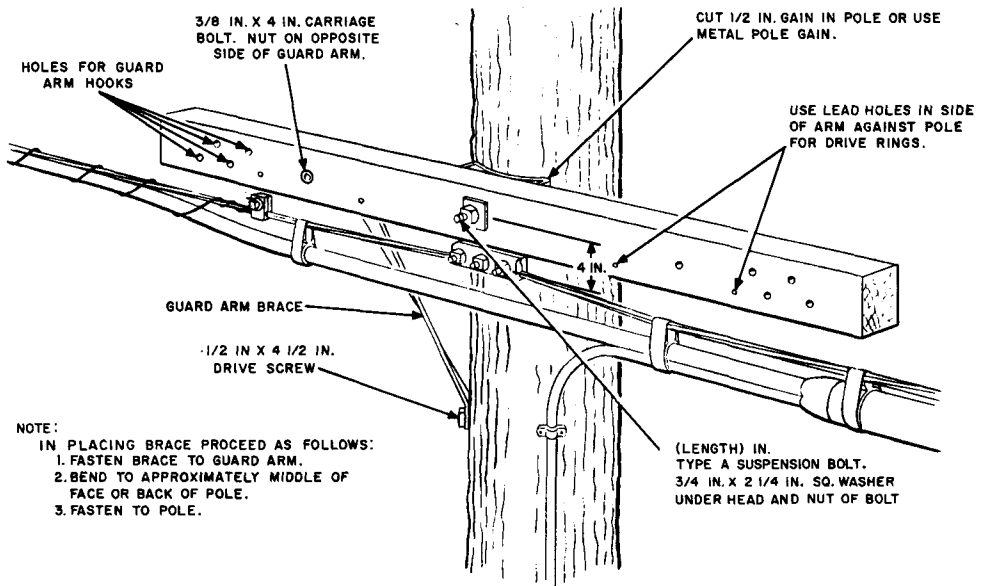


Fig. 4 — Guard Arm Installed

3.02 A metal pole gain installed (as shown in Fig. 5) may be used to avoid the necessity of cutting a gain in the pole.

4. GUARD ARM HOOKS

4.01 Guard arm hooks are used to attach wires to guard arms and also to cross arms other than the DE-type when more than two

drop wires must be attached to the same hook. On a guard arm, install the hooks in the holes provided at the ends of the guard arm (Fig. 6). When the guard arm hooks are used on a cross arm, it may be necessary to drill a 9/16- or 5/8-inch hole for each hook as covered in Section 462-240-200.

4.02 A total of five drop wires, pulling in any direction, may be attached to one guard arm hook. When placing B or C Multiple Drop Wire, consider one multiple drop equal to three drop wires.

5. WIRE RUNS FROM GUARD ARMS

5.01 Distribute drop wires from a guard arm as shown in Fig. 7 and 8.

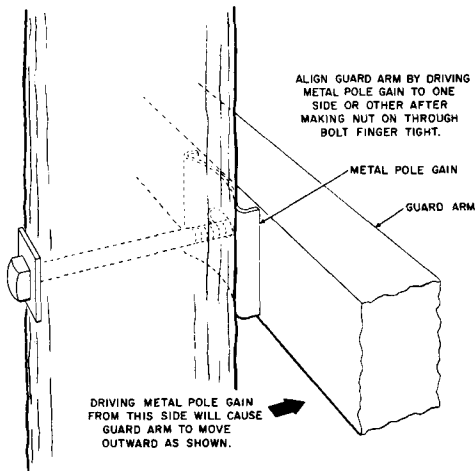


Fig. 5 — Metal Pole Gain Installed

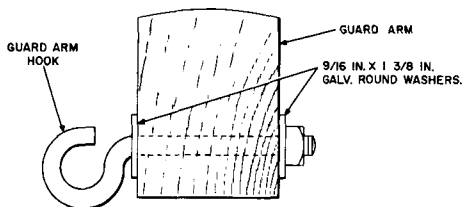


Fig. 6 — Guard Arm Hook Installed

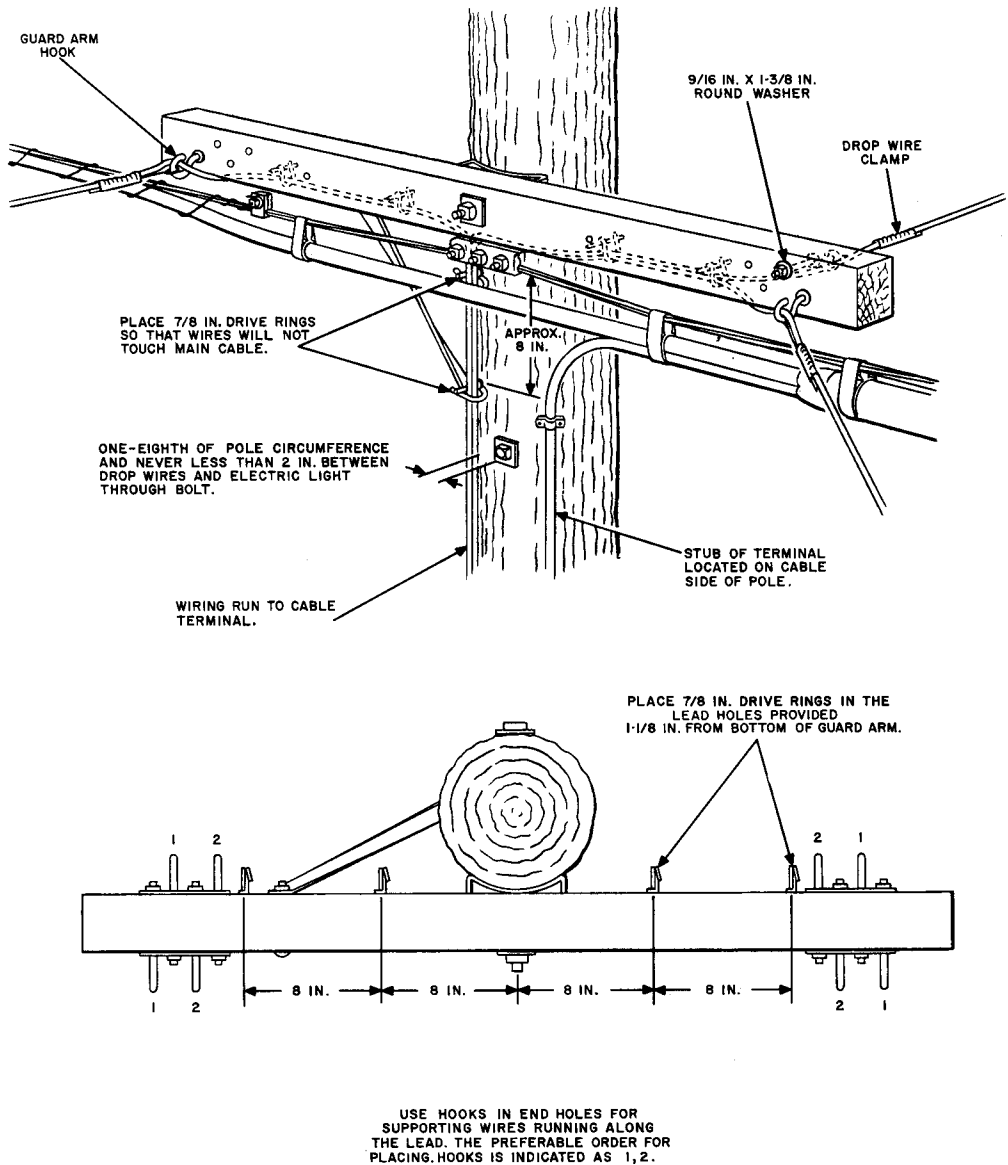


Fig. 7 — Cable Terminal Mounted on Cable Side of Pole

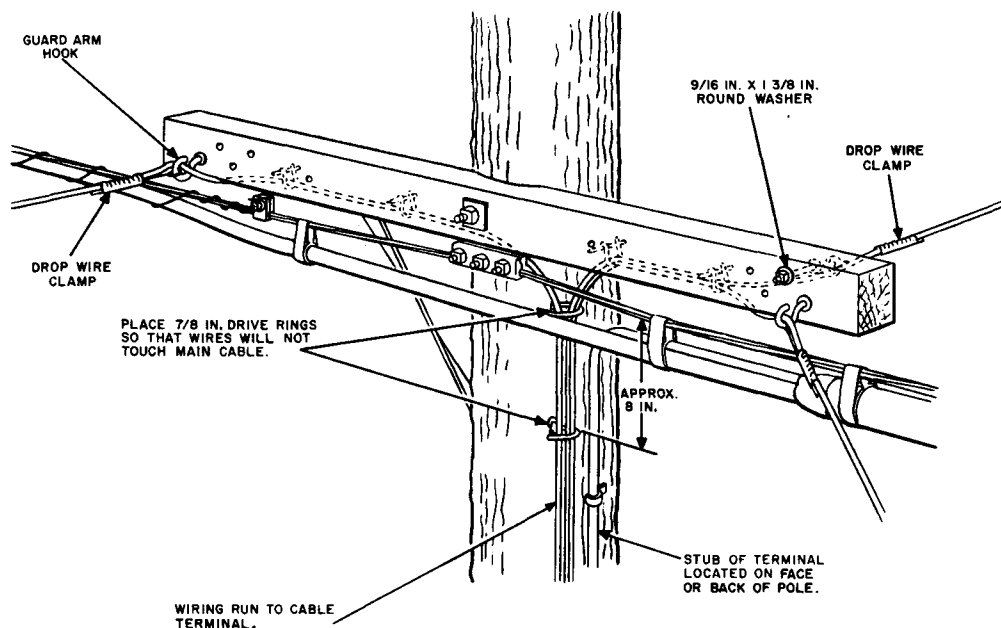


Fig. 8 — Cable Terminal Mounted on Face or Back of Pole

5.02 Attach the drop wire clamp to the guard arm hook by passing the wire tail of the clamp over the hook. Pass the drop wire through the hook, unless the hook is congested, and secure the drop wire in the clamp. Run the wires on the guard arm and pole in a neat manner with sufficient slack so there will be no strain or sharp bends in the drop wire at the drive rings, hooks, or clamps.

5.03 If brackets and knobs have been previously installed on the guard arm and are in serviceable condition, drop wires may be distributed from vacant grooves of the knobs. No more than two drop wires shall be attached to a T knob or more than one drop wire attached to an S knob.

5.04 When installing, removing, or rearranging drop wires, it may be necessary to place and distribute from a new guard arm hook at the opposite end of the guard arm instead of using an existing hook, in order to balance the load on the guard arm.

5.05 When several drop wires are attached to one guard arm and are run to the same building, it is desirable to distribute from both ends of the guard arm to equalize the load provided the required climbing space will be maintained.

5.06 When making runs along the lead from guard arm to guard arm or from guard arm to pole, dead end the drop wires as illustrated in Fig. 9, 10, and 11.

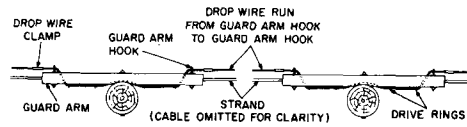


Fig. 9 — Drop Wire Run Along Lead From Guard Arm to Guard Arm

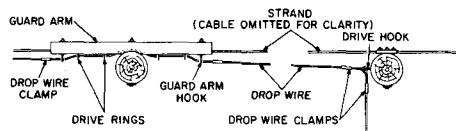


Fig. 10 — Drop Wire Run Along Lead From Guard Arm to Pole

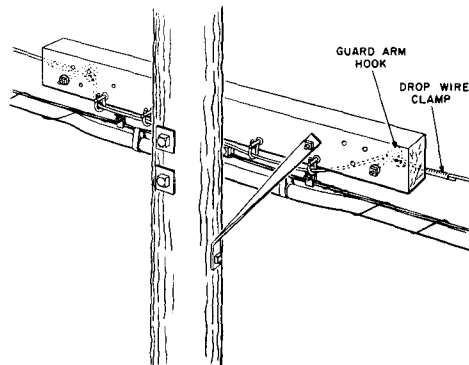


Fig. 11 — Wiring at Intermediate Guard Arm for Run Along the Lead