

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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AT&T Co Standard

SPLICING PLATFORMS

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1. GENERAL

1.01 This section describes methods of installing both the ladder platform and the aerial platforms and outlines the features essential to their proper use and maintenance. ←

2. APPARATUS AND TOOLS

2.01 The platforms and tools required for installing them are listed below: ↗

Clamp, Wire, Lashing, B

Platform, Aerial, Open

42 inches long by 35 inches wide

Platform, Aerial Closed, 52-inch

52 inches long by 43-1/2 inches wide

Platform, Aerial, Closed, 64-inch

64 inches long by 42 inches wide

Platform, Ladder

Handline, Aerial

Saddle, B (Replacement part for Aerial Platform)

Support, Ladder, Strand ↘

2.02 The Open Aerial Platform and the 52-inch Closed Aerial Platform are intended for general splicing work. The 64-inch Closed Aerial Platform is intended for use in splicing toll cables, particularly where cables are supported on opposite sides of the pole. The three aerial platforms are available with four "O" (open end) or four "K" (keeper equipped) hooks or with two B Saddles and two "O" or "K" hooks. The 52-inch platform can also be obtained with two "O" or two "K" hooks and two plain ropes.

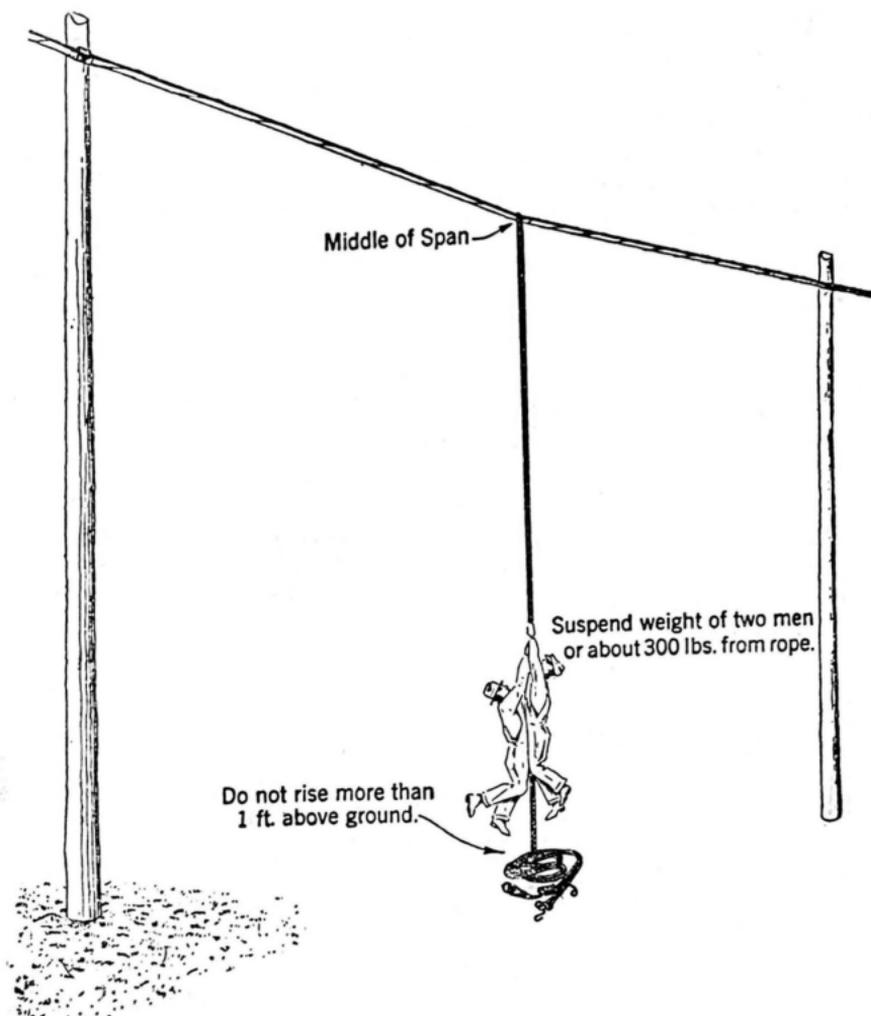
2.03 The Ladder Platform, illustrated in Paragraph 4.04, is used in splicing from an extension ladder.

2.04 The Strand Ladder Support, illustrated in Paragraph 4.02, is used to support the upper end of the extension ladder from the strand.

2.05 The B Saddle, illustrated in Paragraph 5.03 (c), is used in supporting aerial platforms where the cable is lashed to the strand. The saddle can also be used where the cable is supported by rings.

3. PRECAUTIONS

3.01 **Testing Strand:** All 6M strand should be tested before a platform is installed. Where there is any doubt as to whether 10M and larger strand is in good condition, the strand should be tested. The method of testing the strand is illustrated below. The test should be made as close to the center of the span as practicable. Suspend the weight of two men for each platform that is to be installed in the span. If a visual inspection of the strand over trolley contact wires, power wires and railroad tracks indicates that the strand is not likely to withstand the two-man test, do not suspend the platform from the strand until the supervisor has determined whether the strand should be replaced. This precaution should be taken to minimize the possibility of the strand and cable falling and coming in contact with the trolley or power wires or falling across the railroad tracks.



3.02 The derrick platform or the truck mounted platform may be employed to support the splicer when emergency repairs are made on a cable that is supported by a deteriorated strand.

3.03 **General Precautions:** The following precautions shall be observed in using aerial platforms:

- (a) The weight on a platform and ladder shall be limited to two men and the tools and material required.
- (b) Do not place hot solder or paraffin pots directly on the platform. Paraffin and solder should preferably be suspended from the strand or ladder rung by means of a pot hook.
- (c) Paraffin and solder drippings should be removed from platforms.

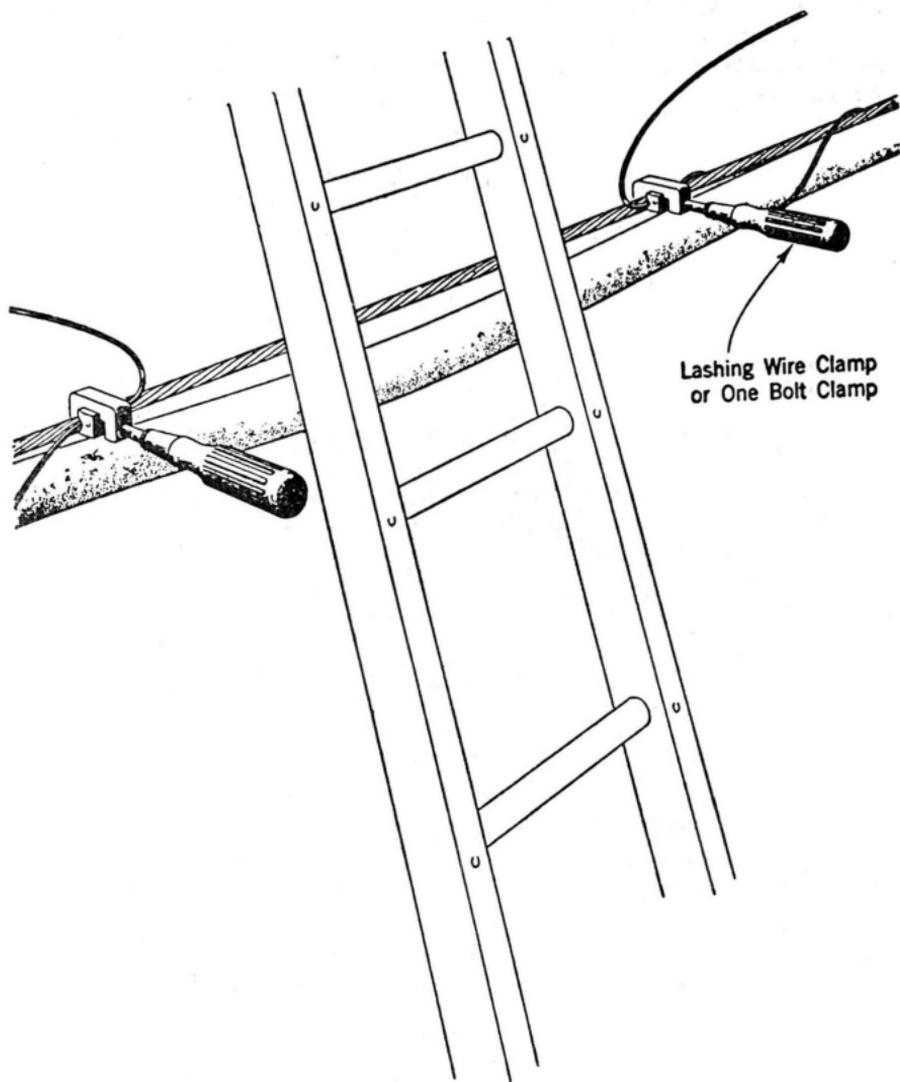
- (d) Coil the guy ropes before transporting the platform in a vehicle. When moving from one location to another do not drag the ropes on the ground.
- (e) Platforms should not be dragged from one location to another.
- (f) Make sure that the support hooks have been properly attached to the strand.
- (g) The platform should be leveled before the guys are fastened.
- (h) Make sure that the guys are taut after the platform is loaded and that they have been tied in accordance with the method shown.
- (i) Avoid twists and kinks in the ropes. Rope kinks should be turned out by hand before the rope is stressed.
- (j) Avoid spilling solder or paraffin on ropes.
- (k) Ropes should be kept away from storage batteries or surfaces such as garage floors or truck platforms upon which acid or alkali may have been spilled.
- (l) Hooks should not be attached to guys at dead-end or false dead-end poles.
- (m) Always attach the hooks to the main strand at dead-end poles.
- (n) Tools or materials should not be placed on a platform where they are likely to roll off. They should preferably be kept in a canvas bucket securely attached to the strand or in some other approved container.
- (o) The furnace should not be operated on the platform.
- (p) The body belt and safety strap should be used while installing, as well as while working on aerial platforms as described in Paragraph 5.10.
- (q) In installing aerial tents or umbrellas, care should be exercised so as not to bring the tent or umbrella in contact with power leads or equipment.

3.04 The helper shall warn pedestrians to avoid passing under platform while the splicer is working, especially when the splicing operation involves boiling out or wiping a joint

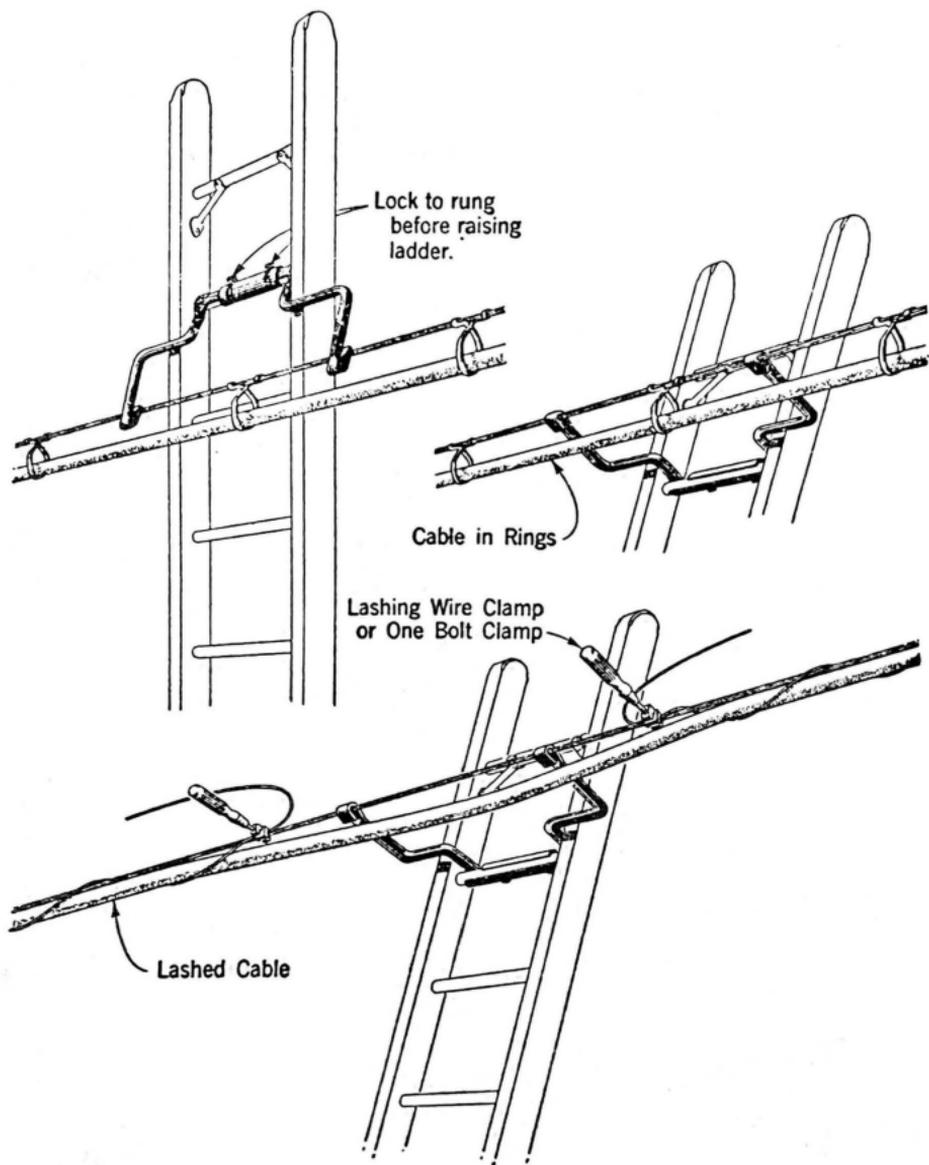
4. INSTALLATION OF LADDER PLATFORM

4.01 The method of installing the Ladder Platform and the Strand Ladder Support in repairing aerial cable is described in the following paragraphs. In areas where a ladder sling is supplied, it may be used in place of the strand ladder support. On lashed cable the wire should be clamped at the ends of the proposed splice and then cut, as illustrated below. The cable should be lowered and, if necessary, the clamps hold-

ing the ends of the lashing wire should be moved to obtain the clearance required in performing the splicing work. This will provide sufficient clearance between the strand and the cable for the installation of the strand ladder support. The ends of the lashing wire should be bent so that they will not interfere with splicing operations.



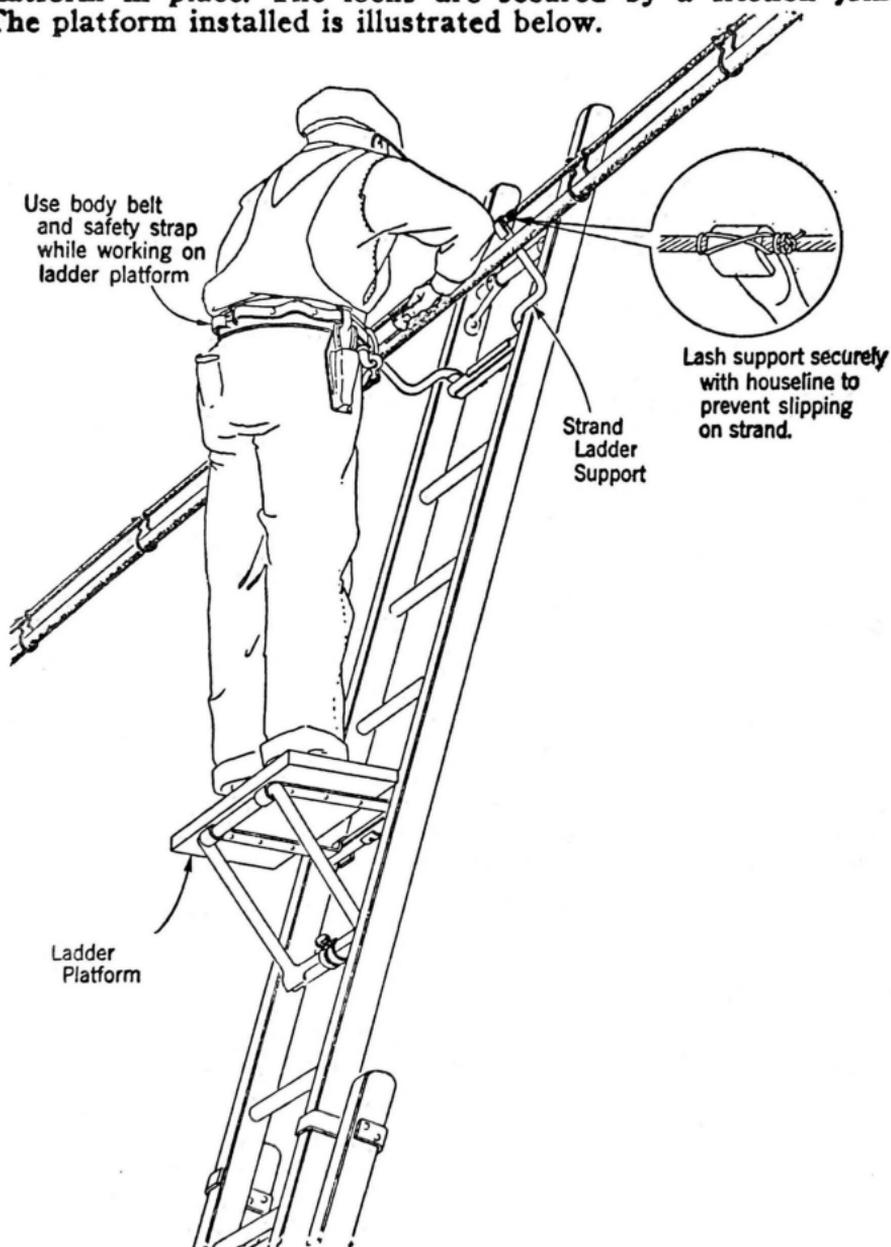
4.02 **Installing Strand Ladder Support:** Place the support on the second rung from the top of the ladder, as illustrated below. Turn the rung lock and tighten the nuts to hold the lock in place.



4.03 Raise the ladder to a vertical position below the cable. Elevate the top section until the strand ladder support is just above the strand as shown in the left-hand figure in Paragraph 4.02, engage the hooks of the support on the strand by lowering the top of the ladder slightly and then moving it away from the strand as shown in the right-hand figure. Move the base of the ladder so that a good footing and satisfactory climbing angle are obtained, with the ladder locks on the rails of the top section engaging a rung of the lower half of the ladder. Lash the hooks of the support securely to the strand with

house line, as shown in Paragraph 4.04, to prevent the support from disengaging or slipping along the strand.

4.04 Placing Ladder Platform: After the ladder has been erected, place the ladder platform so that the top hook is on the sixth rung and the bottom hook on the seventh rung from the top of the ladder. Turn the rung locks to hold the platform in place. The locks are secured by a friction joint. The platform installed is illustrated below.

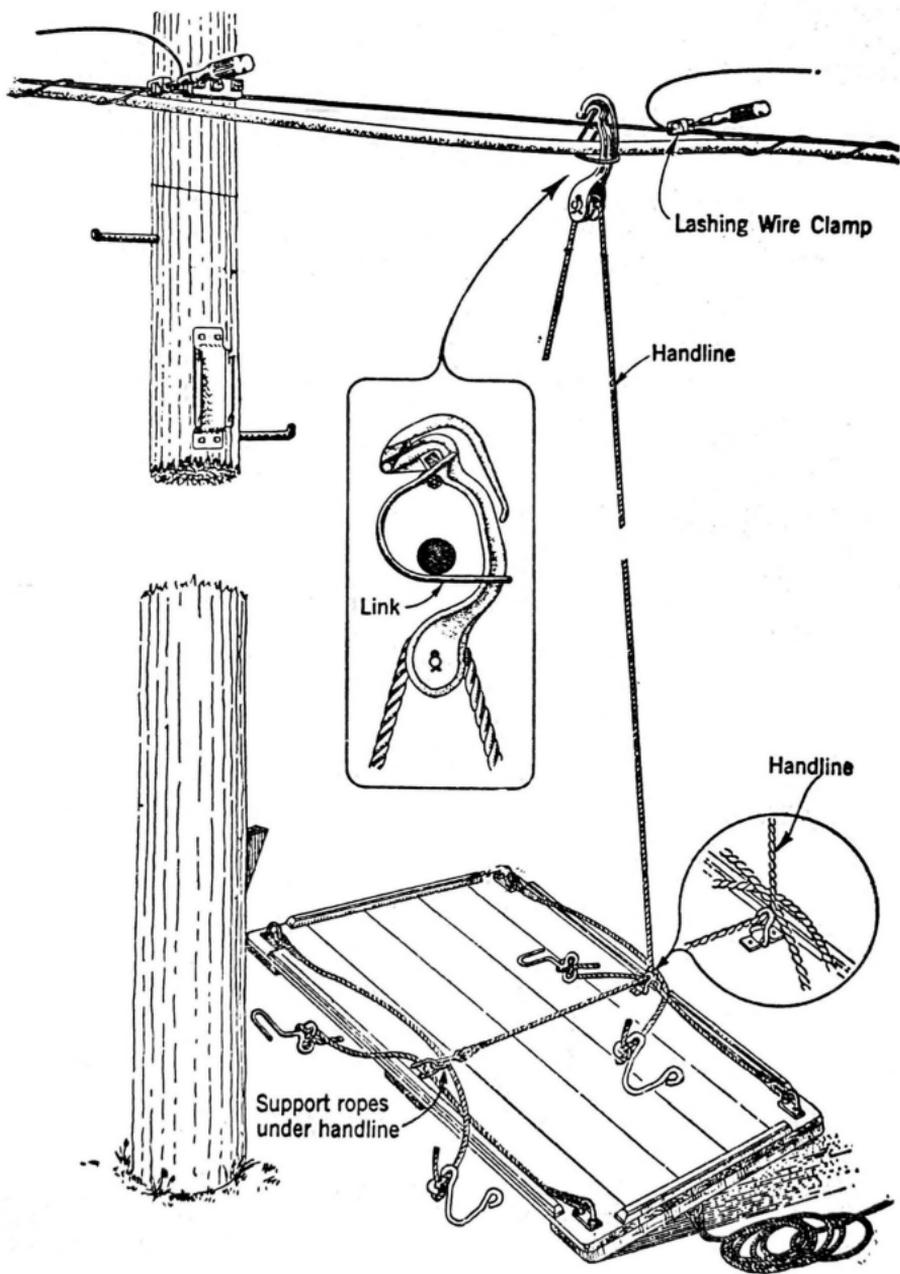


- 4.05 To mount the platform grasp the side rails with the hands, place one knee on the platform and then the other and finally place one foot and then the other on the platform. When in the standing position place the safety strap around the cable and strand.
- 4.06 To remove the platform and support, reverse the procedure described above.
- 4.07 The ladder platform should be removed before the extension ladder is lowered or moved.

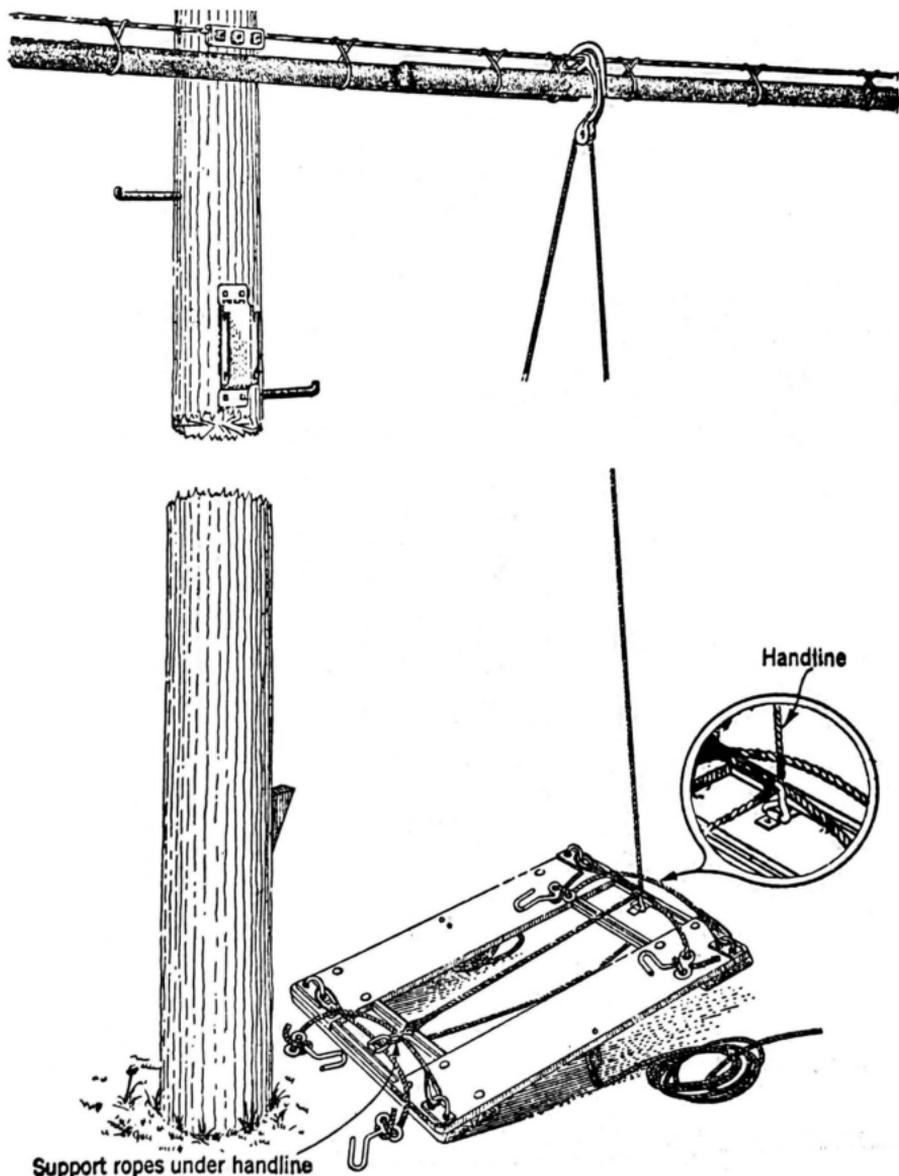
5. INSTALLATION OF AERIAL PLATFORMS

5.01 **Attaching Aerial Handline to Platform:** Platforms should be raised for installation by means of the aerial handline. The method of attaching the handline to the platform and the manner in which the support ropes should be placed so that the hooks and saddles can be reached conveniently for attachment to the strand are illustrated below. On lashed cable the wire should be clamped and cut as outlined in Paragraph 4.01 before the handline is placed on the strand.

- (a) The following figure illustrates the method of attaching the handline to a closed aerial platform.

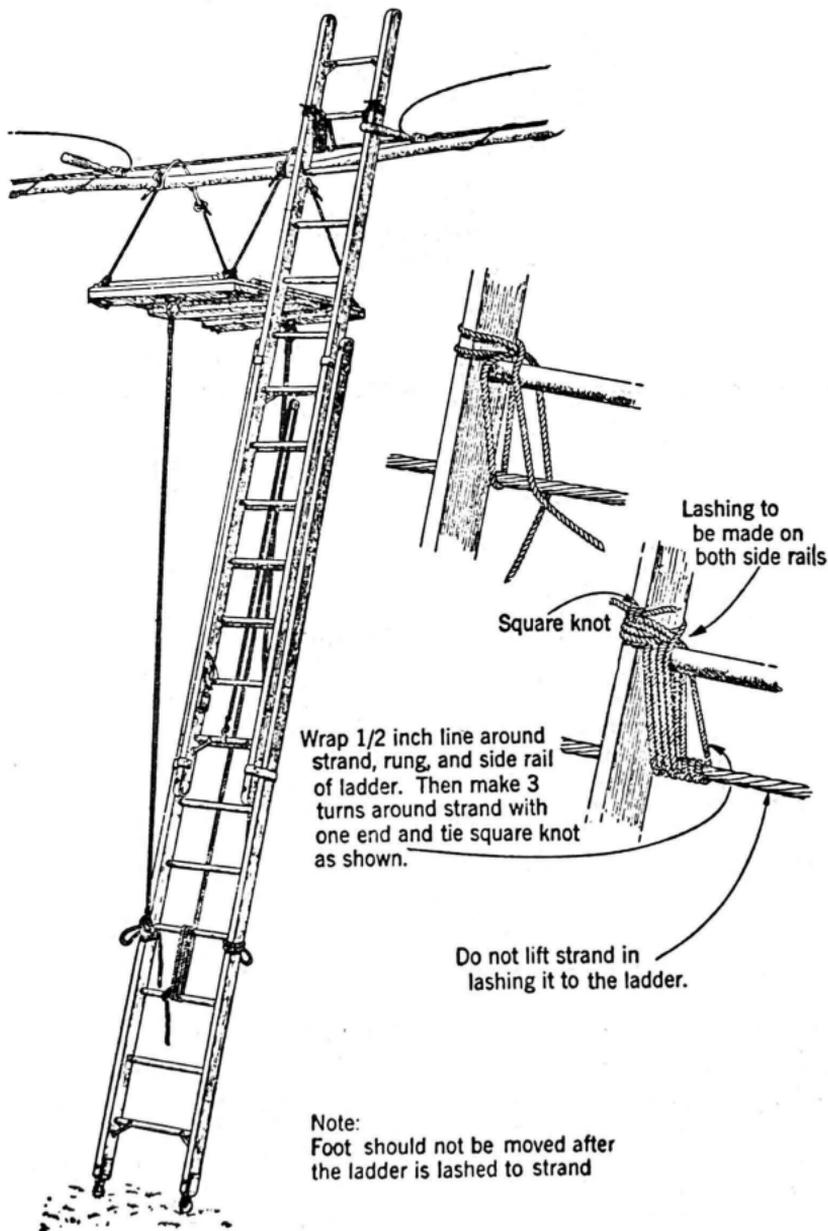


(b) The following figure shows the method of attaching the handline to the open aerial platform.



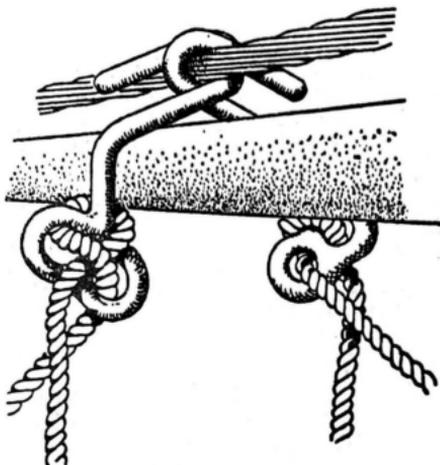
5.02 Use of Extension Ladder: An extension ladder should be used to facilitate guying an aerial platform and to relieve the strand of some of the load where, (1) the platform is suspended more than 3 or 4 feet from the pole in which case the guy ropes cannot be tied satisfactorily to the pole, (2) where the platform is suspended in a slack span and (3) where a second

platform is installed in the span. The load on the platform and ladder should be limited to two men and the tools and materials required. The method of installing extension ladders is described in Section G83.620. Before raising the platform, tie the ladder to the strand as illustrated below. Do not move the base of the ladder after the ladder has been lashed to the strand.

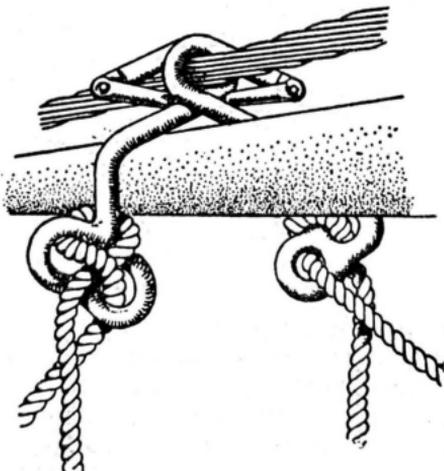


5.03 **Raising Platform and Engaging Hooks:** In raising the platform one workman should stand near the pole or ladder but not directly under the block of the aerial handline. The man on the ground should raise the platform to within several inches of the strand. The workman on the pole or ladder should engage the top pair of hooks with the strand.

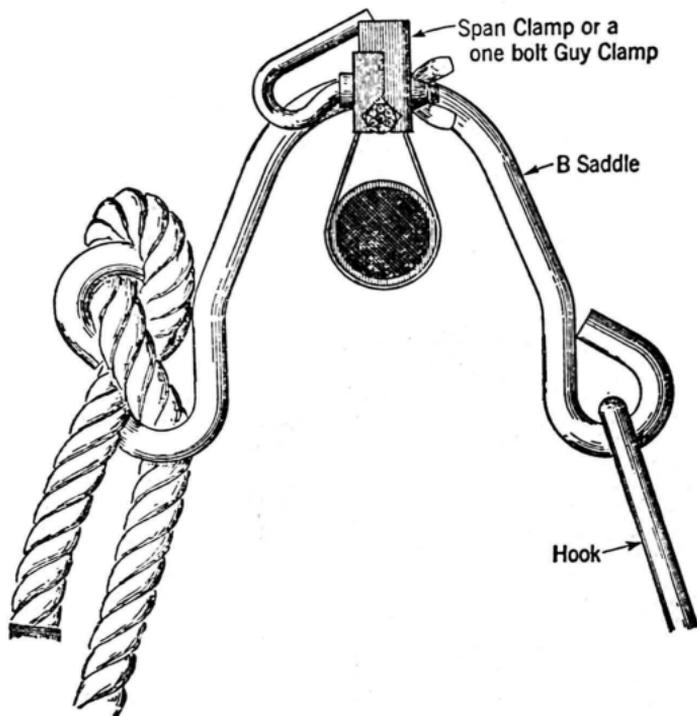
(a) The figure below shows the method of engaging the "O" hooks.



(b) The following illustrates the method of engaging the "K" hooks.



(c) Where the cable is lashed to the strand, the B Saddle should be placed over the strand and the hook engaged in the eye of the saddle, as illustrated below.



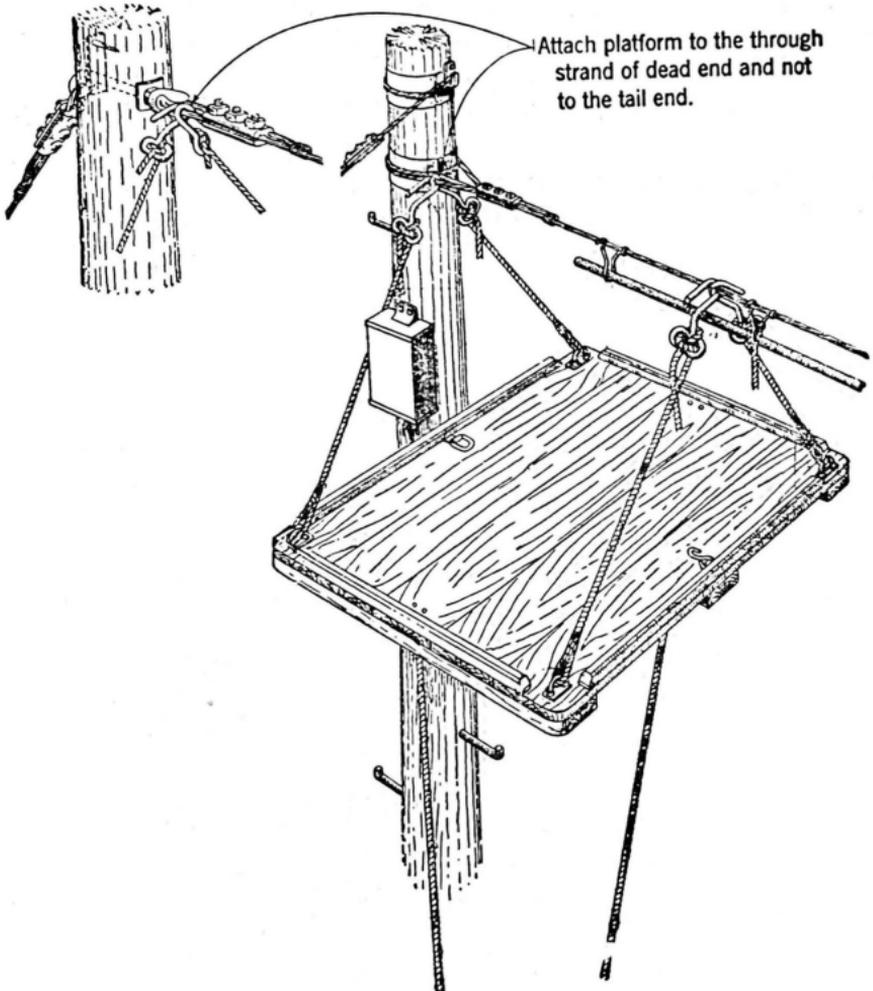
5.04 A span clamp or one bolt guy clamp may be used, as illustrated above, to prevent sliding of the hooks or saddle along the strand.

5.05 After the first pair of hooks or saddle and hook have been engaged, proceed as follows:

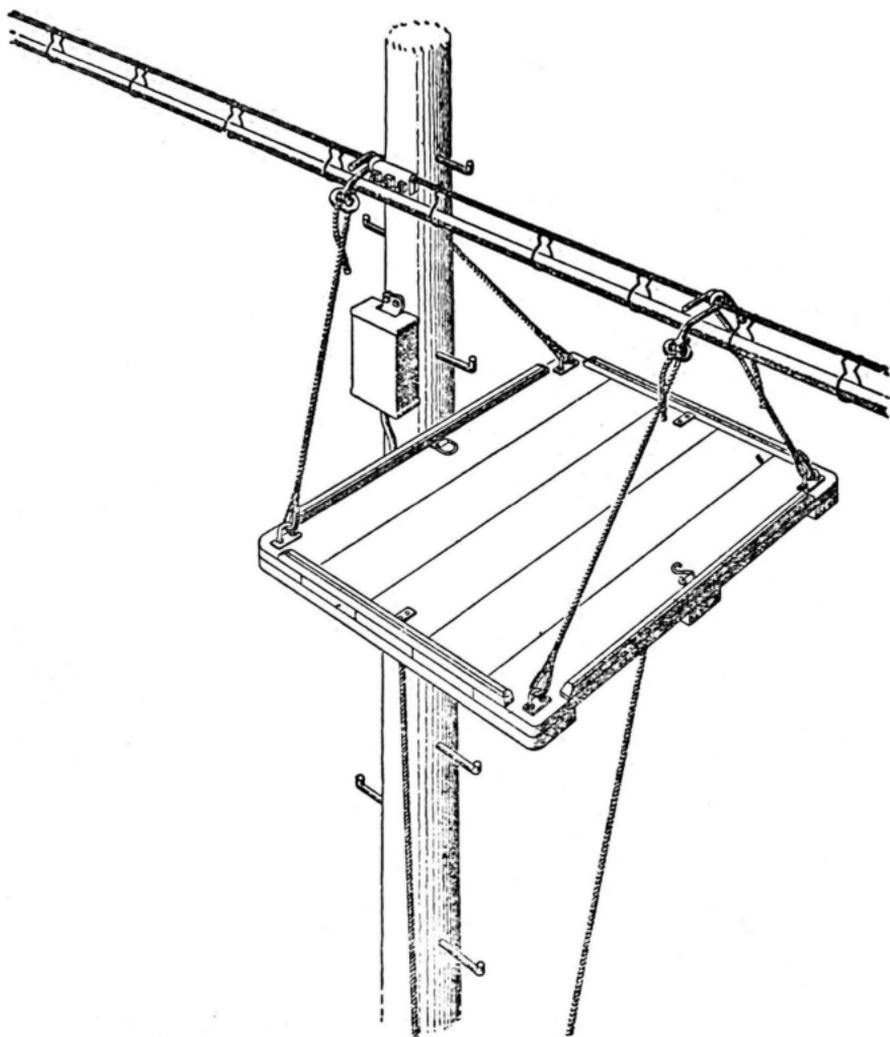
- (1) The man on the ground should lower the platform so that it is suspended by the two support ropes that have just been attached to the strand.
- (2) The workman on the pole or ladder should disengage the handline from the hook on the platform and move the handline block on the strand to approximately six inches from the pole or ladder.
- (3) The man on the ground should then raise the other end of the platform in order that the workman above can engage the second pair of hooks (or saddle and hook) on the

strand. The support ropes shall not be attached to guard arms, pole steps or other pole hardware.

- (a) At dead-end poles, the hooks should be attached to the through end of the strand, as illustrated, rather than on the tail end which is held in the three-bolt clamp.

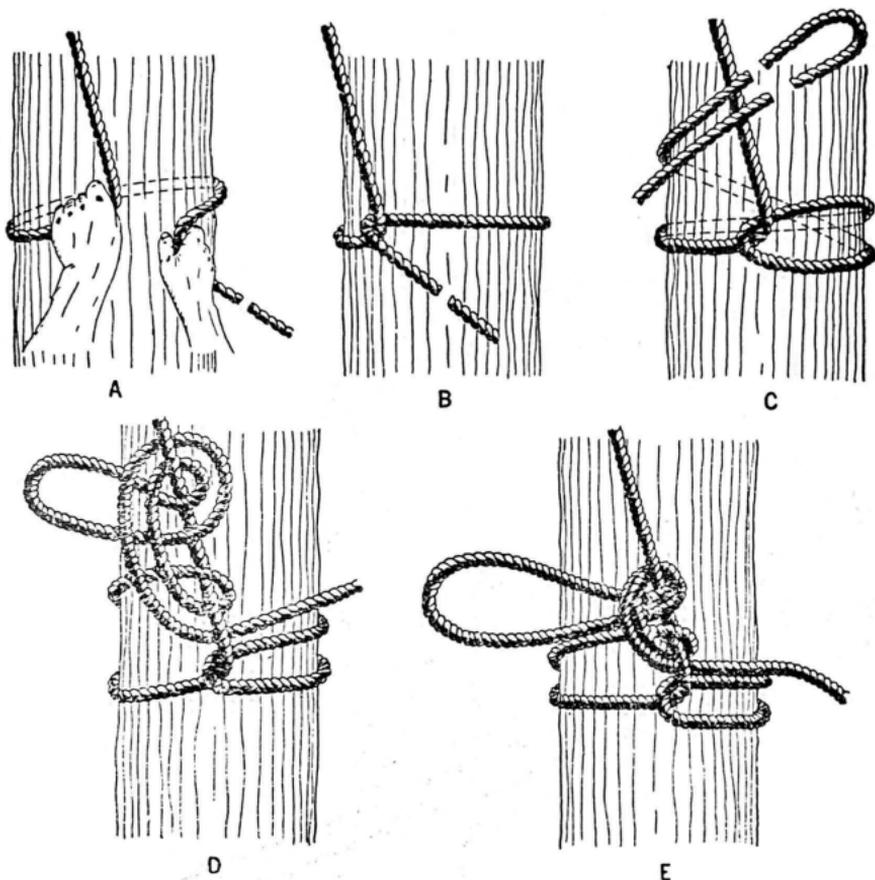


(b) In splicing at poles, the platform hooks can usually be installed as shown below. When platforms equipped with open type hooks are placed in this way, the hooks at the pole need not be interlocked.



5.06 Before tying the guy ropes, the platform should be leveled. The length of the support ropes can be adjusted readily by moving them through the double eye of the hooks. Rope adjustments should not be made when standing on the platform.

5.07 **Tying Guy Ropes:** The operations required in tying guy ropes are illustrated and outlined below.



(1) Facing the pole or side rail of the ladder from the side on which the platform is hung, grasp the guy rope on the left-hand side of the platform about 4-1/2 feet from the ground and pass the loose end back of the pole or ladder, as indicated in (A). Place the hitch so that it will not interfere with pole steps.

(2) Pass the loose end of the rope over the standing end and pull to the desired tension (B). The hitch should be made about 4-1/2 feet from the ground.

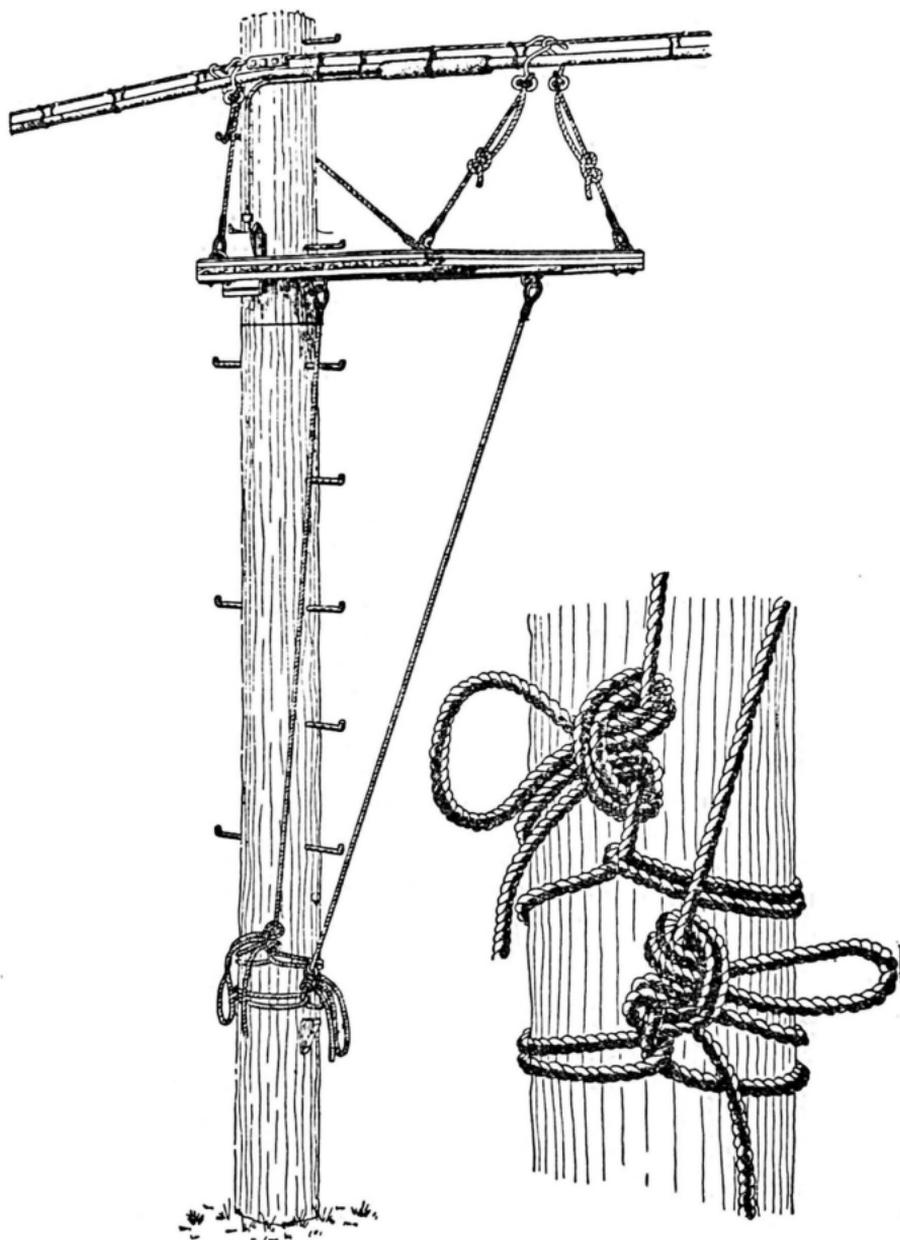
(3) Pass the free end around the back of the pole so that it crosses the first turn, as shown in (C). Hold the rope in this position to snub the pull on the platform.

(4) Secure the pull with two half hitches on the standing rope, as shown in (D).

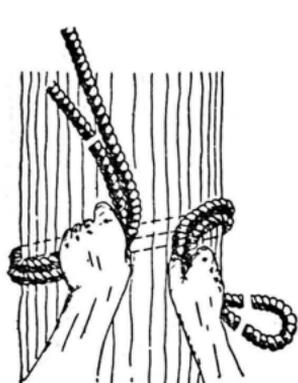
(5) The splicer should then stand on the right-hand side of the platform (which is the side opposite to the one just guyed) with his hands holding the strand firmly to make sure that the guy has been pulled sufficiently to level the platform.

(6) The completed tie is shown in (E).

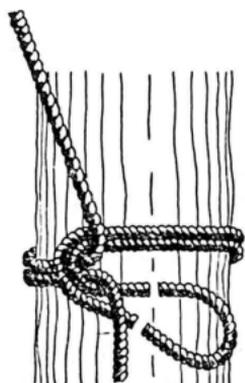
5.08 The guy rope on the other side of the platform should be secured to the pole or ladder just below the first tie. Since this rope leads from the side opposite that of the first, it must necessarily be snubbed in the opposite direction. To do this, hold the standing part in the right hand and pass the free end of the rope back of the pole. Pass the end over the standing part and pull to the desired tension. Complete the knot as before, keeping clear of pole steps to avoid obstruction of the climbing space. The following illustrates both guy ropes tied to a pole.



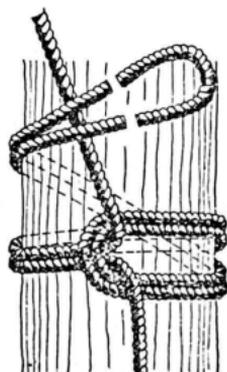
5.09 If the loose end of the guy rope is too long for convenient handling, double the rope and proceed as outlined in Paragraph 5.07. The following illustrates a guy rope tie with the rope doubled.



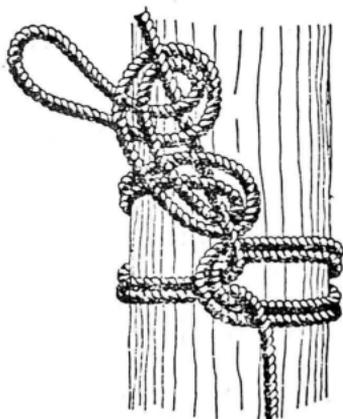
A



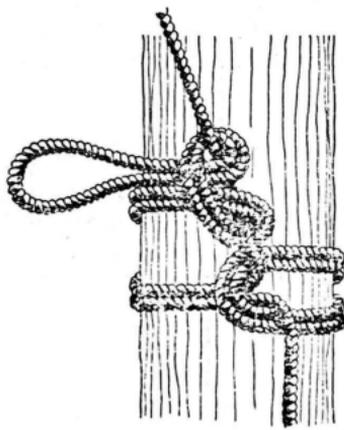
B



C



D



E

5.10 After a platform has been installed, disconnect the safety strap from the pole or ladder and strand and attach the free snap hook to the strand. Then climb onto the platform. The safety strap should be used while working on platforms. The strap may either be placed around the strand with both snap hooks connected to the same Dee ring or one snap hook may be attached to the strand and the other to a Dee ring.

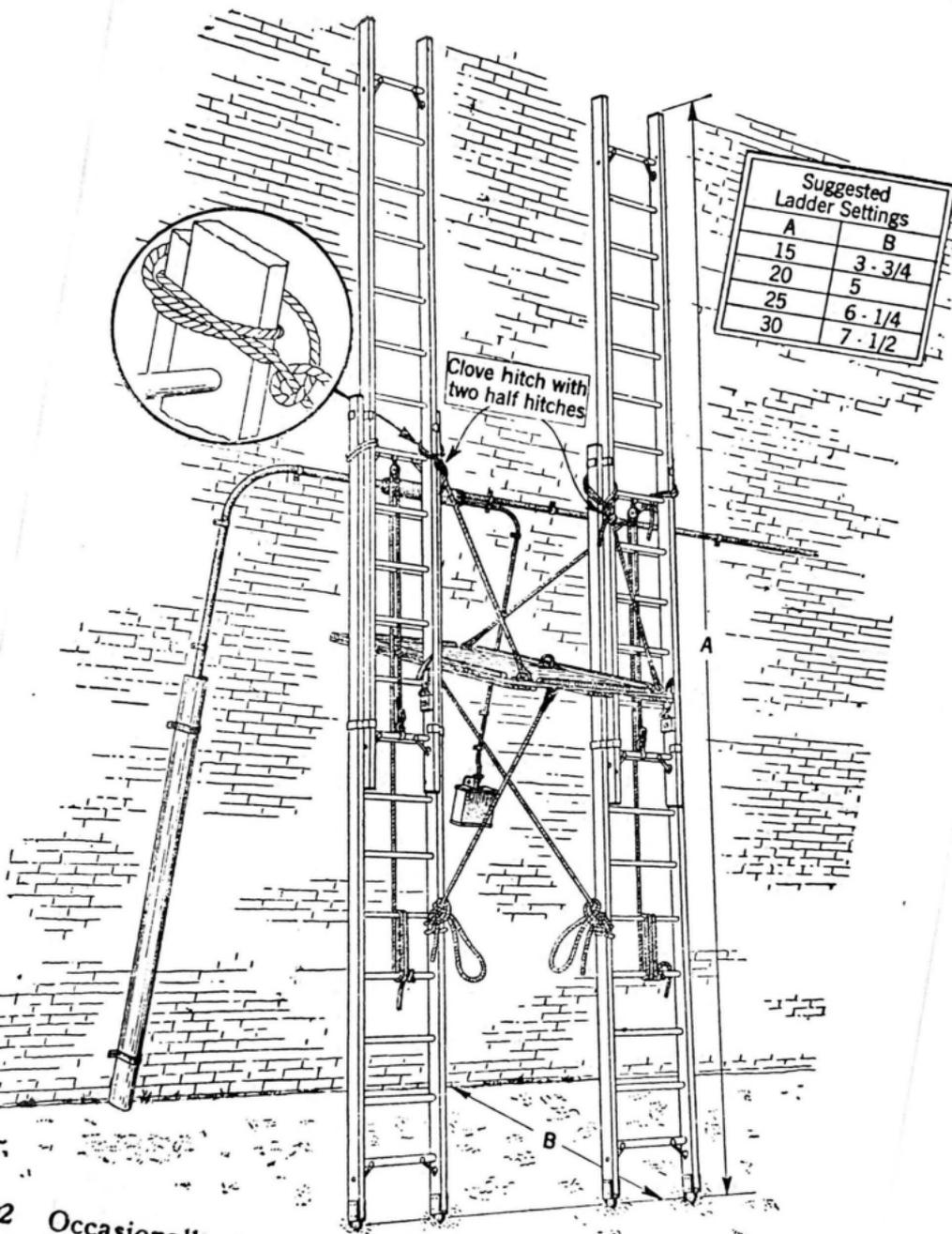
6. LOWERING PLATFORMS

6.01 In lowering platforms proceed as follows:

- (1) The workman operating the handline should stand near the pole or ladder but not directly under the platform.
- (2) The workman on the pole should attach the handline to the strand approximately one foot from the pole and engage the handline hook in the Dee ring of the platform.
- (3) The groundman should untie the guy ropes from the pole or ladder.
- (4) He should then raise the platform to permit the workman above to remove the support rope hooks from the strand near the pole or ladder.
- (5) The groundman should lower the platform to a vertical position. The splicer on the pole should move the handline to within 8 inches of the second pair of hooks, and engage the handline in the hook on the platform.
- (6) The groundman should raise the platform so that the workman above can remove the second pair of hooks from the strand. The platform should then be lowered to the ground and the handline removed.

7. INSTALLING A PLATFORM WITHOUT ATTACHING TO STRAND

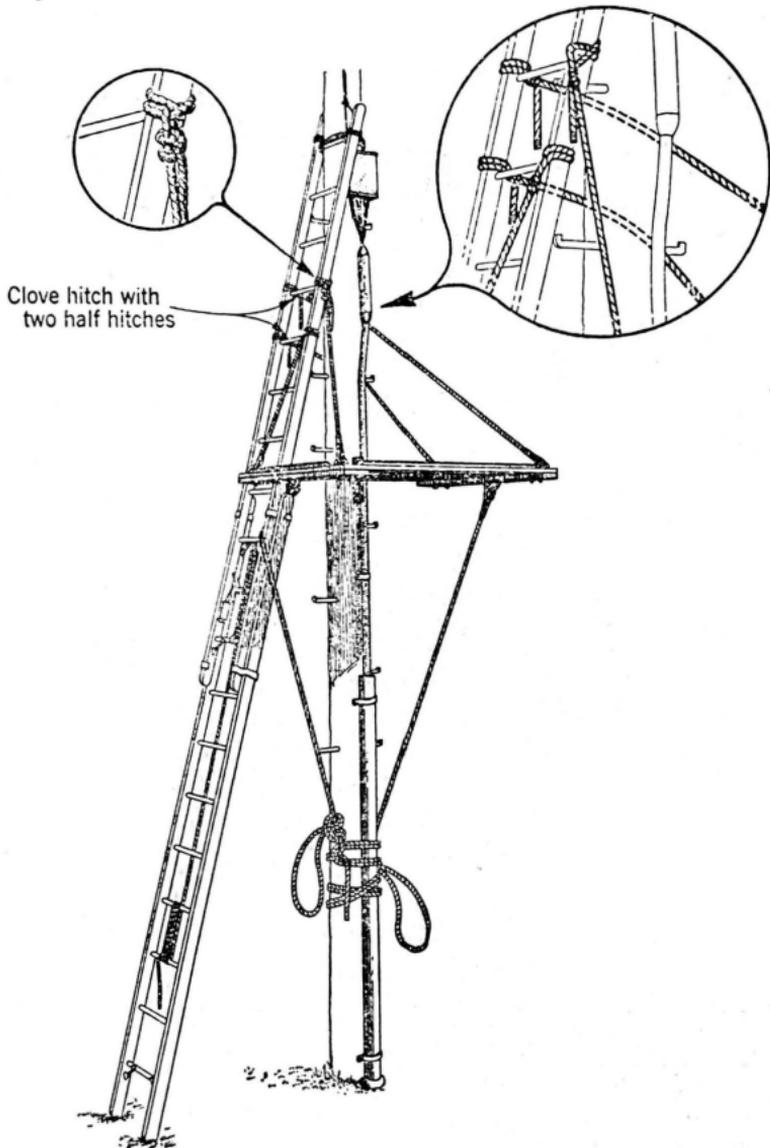
7.01 The figure below shows a platform supported against the wall of a building by means of two ladders. The ladders should be installed as described in Section G83.620. The support ropes should be attached to the side rails of the ladders by means of a clove hitch and two half hitches, as illustrated (see Section G85.800). The guy ropes should be tied as outlined in Paragraph 5.07.



2 Occasionally it is necessary to make a splice or an insulating joint on a pole under such conditions that it is not practicable to suspend the platform from the strand. In such a case, the platform may be hung from a ladder, as shown

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in the illustration below. The support ropes should be attached to the side rails of the ladder by means of a clove hitch and two half hitches. One of the guy ropes should be passed around the side rail of the ladder in order to hold the platform close to the pole.



8. INSPECTION ROUTINE

8.01 Platforms and ladders should be inspected at about weekly intervals while in use to ensure that they are in good condition. If the platform is in need of repair or paint-

ing, it should be exchanged at once in accordance with the Company's established routine, for one in good condition.

8.02 The important conditions which require replacement of the platform are:

- (a) Broken or cracked boards.
- (b) Defective hardware.
- (c) Loose bolts or screws.
- (d) Defective rope (see Part 9).

9. INSPECTION OF ROPE

9.01 In view of the numerous conditions which may affect the strength of rope and as only part of the rope may be affected, examination should be made about once a week while the platform is in use to determine the condition of the rope throughout its length, as outlined in the following:

9.02 The important conditions to look for on the surface of the rope are:

- (a) Abrasion (broken fibres).
- (b) Cuts.
- (c) Extremely soft (badly worn rope is extremely soft and has lost its stretch).
- (d) Decayed or burnt by hot materials or chemicals.

9.03 Separate the strand at three-foot intervals for internal observations. The important conditions to look for are listed below:

- (a) Broken fibres. This condition can be distinguished by the presence of short unattached fibres in the core of the rope.
- (b) Fine powder which indicates presence of grit.
- (c) Mildew or mold.
- (d) Change in color of fibre. Compare the color of the fibre at various intervals to determine this.

9.04 When defective rope is found, it should be replaced or the platform should be exchanged, depending on the Company's routine.

9.05 Where minor repairs are made in the field, worn or rotted support or guy ropes should be replaced as follows: Cut the old rope at the thimble. Thread one end of the new rope through the thimble and make an eye splice in it. To prevent raveling, a crown splice should be made at the free end of the rope. The method of making rope splices is described in Section G85.800.

9.06 When replacing a hook, thread the support rope through the double eye, as shown in the illustration in Paragraph 5.03.