

## F SPAN CLAMP

### DESCRIPTION AND INSTALLATION

#### CONTENTS PAGE

1. GENERAL	1
2. DESCRIPTION	1
F Span Clamp	1
B Clamp Wrench	2
3. INSTALLATION	2
4. REMOVING F SPAN CLAMP	10

#### 1. GENERAL

1.01 This section covers the description and installation of the F Span Clamp which is used to attach drop wire to a cable suspension strand from the ground by using a B Clamp Wrench and standard tree pruner handle sections.

1.02 The F Span Clamp is used for attaching drop wire clamps to suspension strand from the ground at locations where existing conditions such as steep or rocky terrain, heavy trees or shrubbery, enclosed rear lots and fencing make the use of ladders impractical or potentially hazardous. The F Span Clamp may be used on 6M or 10M galvanized strand and 6M, 10M, or 16M CR strand. It may also be used on the jacketed suspension strand of self supporting cable. **The F Span Clamp should not be used on 16M or 25M galvanized strand.**

1.03 **Do not use the F Span Clamp on installations where the subscriber's**

**premises are located on the opposite side of the roadway from the distribution cable.**

#### 2. DESCRIPTION

##### F Span Clamp

2.01 The F Span Clamp, illustrated in Fig. 1 is an aluminum clamp that is shaped at one end to grip the suspension strand. A galvanized steel hook for attaching and supporting drop wire clamps is located at the other end. The lower side of the clamp is moved by the beveled portion of the clamp screw when rotated in a clockwise direction. The forward motion of the lower clamp side forces the strand against the curved upper clamp side locking the clamp securely on the strand. The clamp screw is turned by the B Clamp Wrench locked into the handle of a standard tree pruner section.

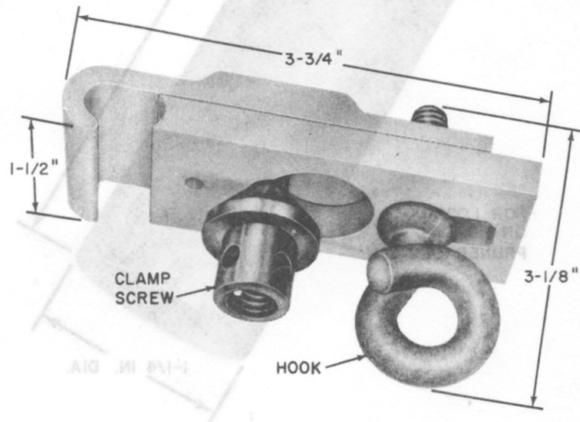
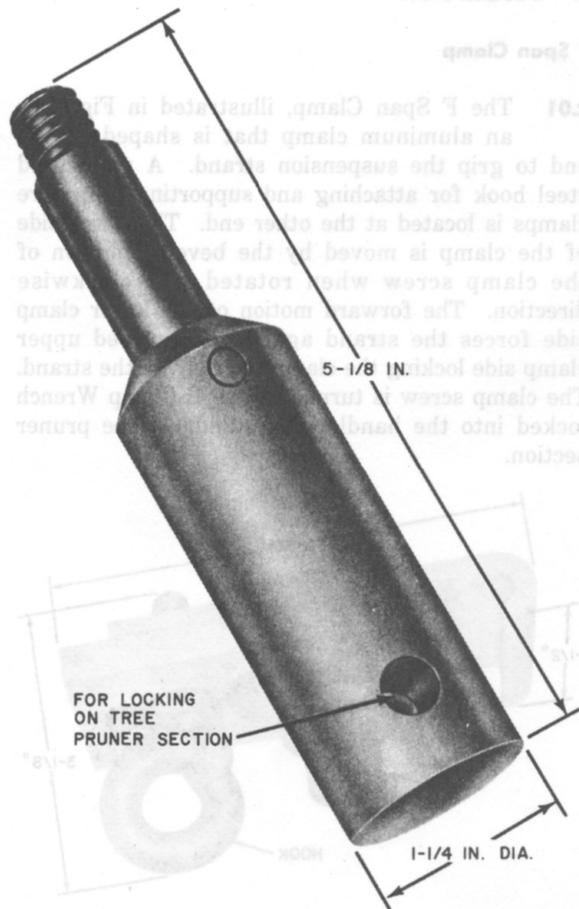


Fig. 1—F Span Clamp

**B Clamp Wrench**

**2.02** The B Clamp Wrench illustrated in Fig. 2 consists of a machined and threaded steel rod locked and pinned in an aluminum body. The threaded end of the steel rod screws into the clamp screw of the F Span Clamp. The body of the wrench fits into the end of a tree pruner handle section and the recessed hold at the base is used for locking the wrench in the pruner section.



**Fig. 2—B Clamp Wrench**

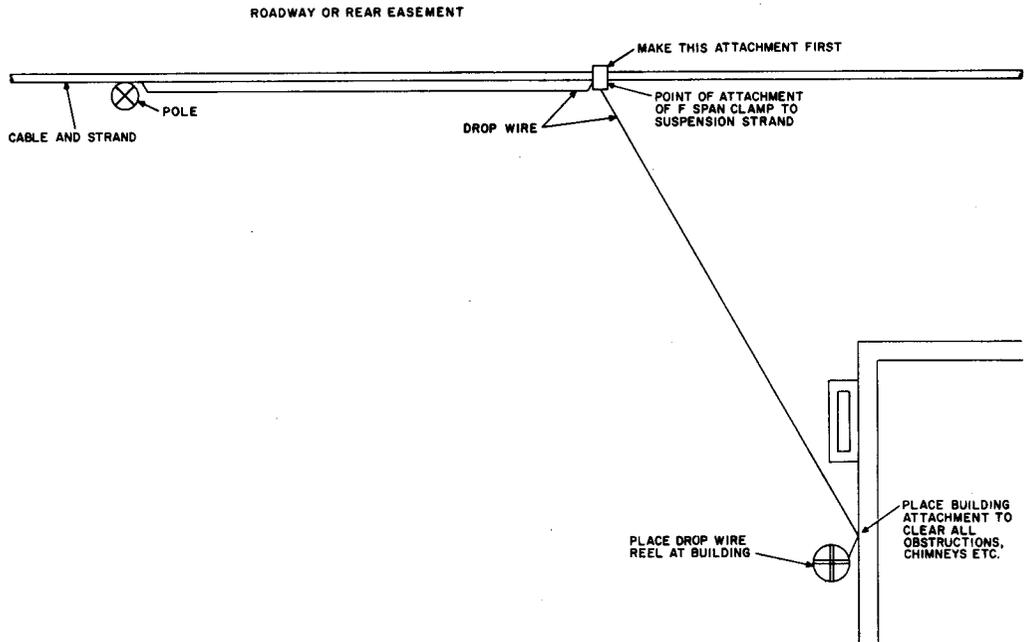
**3. INSTALLATION**

**3.01** Contrary to normal practices, the procedure for placing drop wire with the F Span Clamp requires that the suspension strand attachment must be completed first. For this reason, the F Span Clamp is not recommended for use when the subscriber's premises are located on the opposite side of the street from the distribution cable. The danger in such cases is that vehicular traffic may be obscured from the craftsman's vision during building attachment operations. Figure 3 shows the relative positions of the pole, F Span Clamp, and the building attachments.

**3.02** The F Span Clamp eliminates the necessity for placing a ladder against the suspension strand when installing drop wires from any mid-span location to a customer's building. The F Span Clamp is particularly advantageous where it is difficult or potentially hazardous to place a ladder against the strand.

**3.03** To install an F Span Clamp on suspension strand, proceed as follows:

- (1) Determine the location of the F Span Clamp on the strand and the drop wire building attachment to avoid obstructions such as chimneys, etc (Fig. 3).
- (2) Place the building attachment hardware for supporting the drop wire as described in Section 462-350-213. Place the drop wire reel near the attachment location.
- (3) Unroll sufficient drop wire to reach the span clamp location and the cable distribution terminal at the pole.
- (4) Make certain the F Span Clamp is open as wide as possible. Back off the beveled clamp screw, if necessary. Screw the B Clamp Wrench



**Fig. 3—Relative Positions of Pole, Building and F Span Clamp**

into the clamp screw of the span clamp until the shoulder of the wrench rests against the rim of the clamp screw. Insert the base of the B

Clamp Wrench in the top of the tree pruner handle and lock the wrench securely in place (Fig. 4).

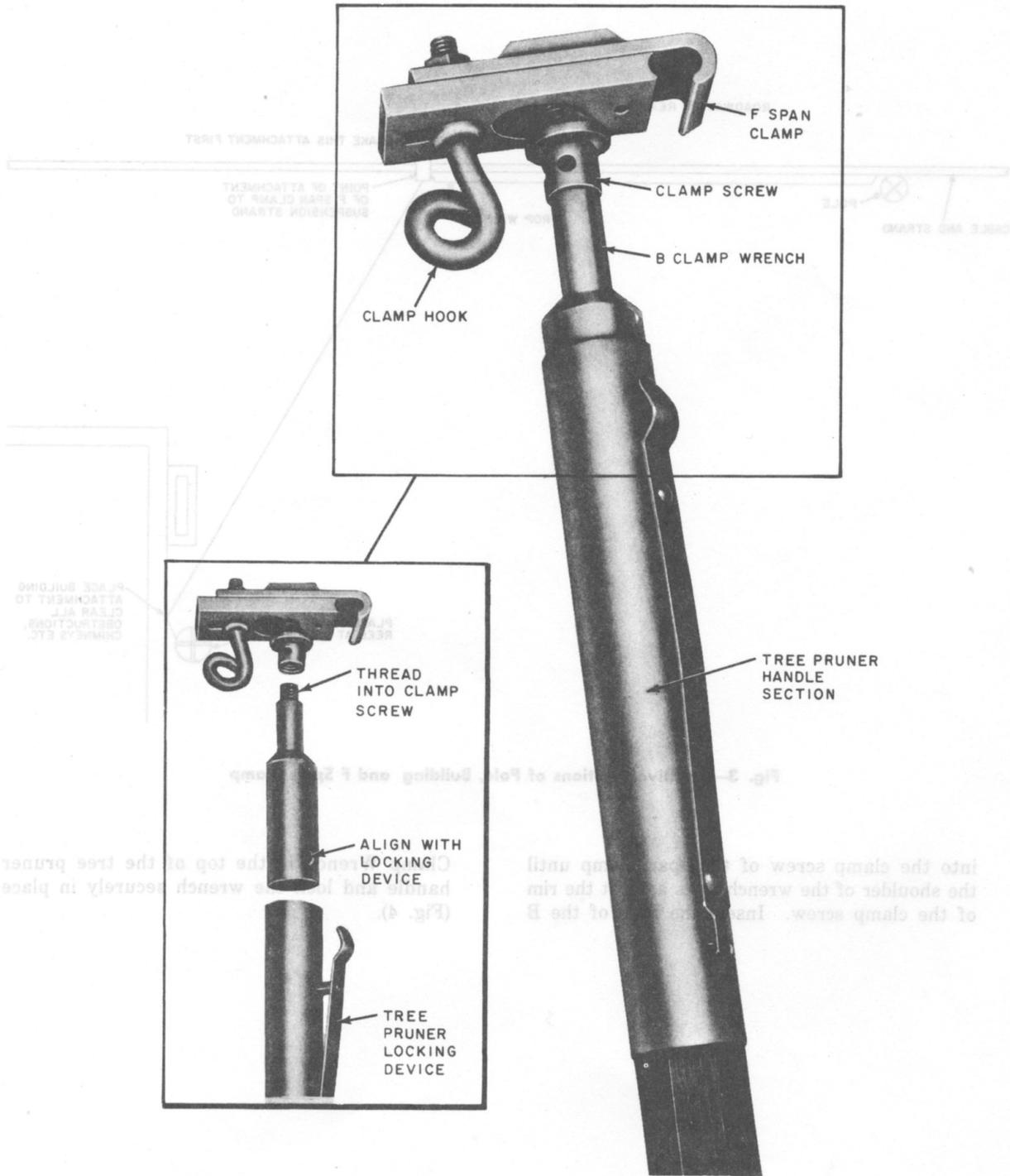


Fig. 4—Clamp and Wrench Attached to Tree Pruner Handle

(5) Install the two drop wire clamps on the drop wire directly below the proposed span

clamp location on the strand. Leave a 6-inch loop between the drop wire clamps (Fig. 5).

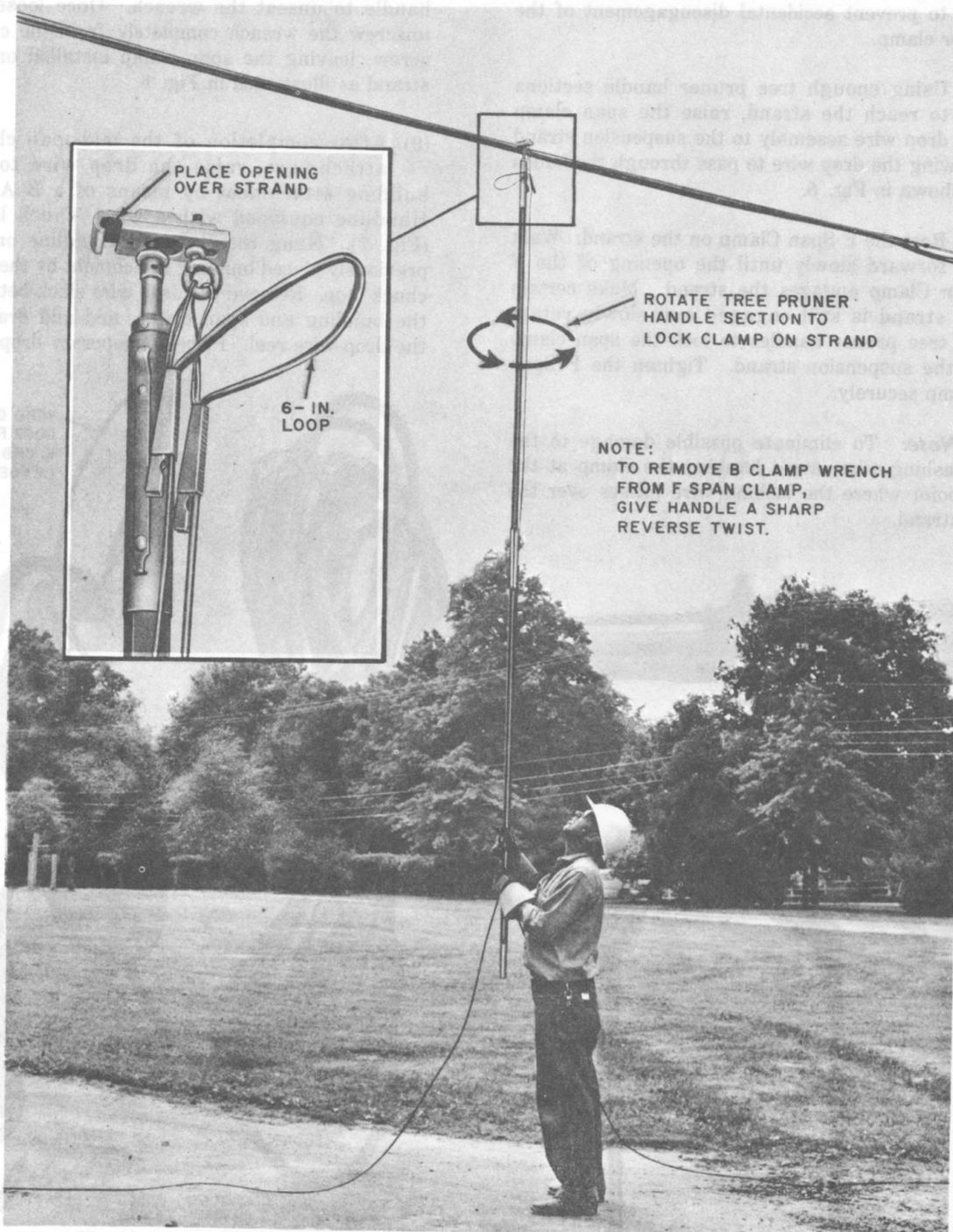


Fig. 5—Raising Span Clamp Assembly to Strand

(5) Place the drop wire clamp assemblies on the hook of the F Span Clamp. The drop wire clamp toward the building attachment should be placed last to prevent accidental disengagement of the other clamp.

(6) Using enough tree pruner handle sections to reach the strand, raise the span clamp and drop wire assembly to the suspension strand allowing the drop wire to pass through the hands as shown in Fig. 5.

(7) Rest the F Span Clamp on the strand. Walk forward slowly until the opening of the F Span Clamp engages the strand. Make certain the strand is still engaged and slowly rotate the tree pruner handles to lock the span clamp on the suspension strand. Tighten the F Span Clamp securely.

**Note:** To eliminate possible damage to the lashing wire, avoid locating the clamp at the point where the lashing wire passes over the strand.

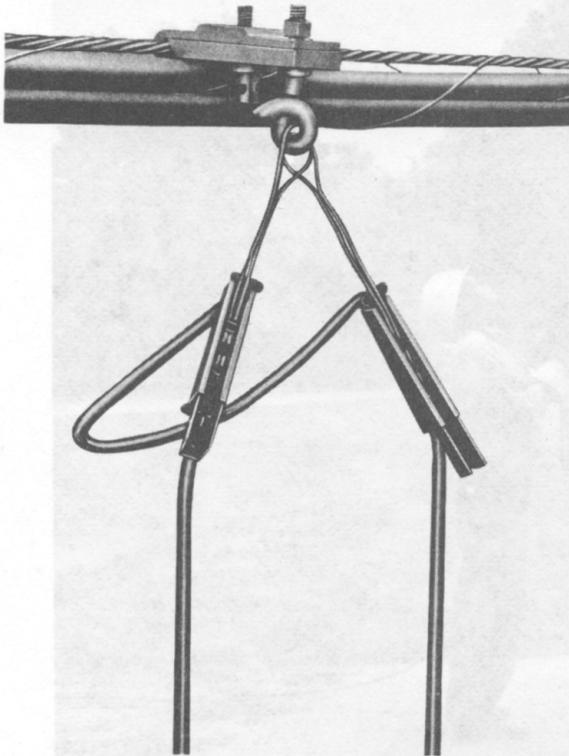


Fig. 6—F Span Clamp Installed on Strand

(8) Disengage the B Clamp Wrench from the span clamp assembly by providing a sharp reverse twisting motion on the tree pruner handle to unseat the wrench. Once loosened, unscrew the wrench completely from the clamp screw, leaving the span clamp installed on the strand as illustrated in Fig. 6.

(9) After completion of the mid-span clamp attachment, raise the drop wire to the building attachment by means of a B Aerial Handline equipped with a wire "chuck loop" (Fig. 7). Hang the B Aerial Handline on the previously placed building attachment by the wire chuck loop. Remove the drop wire slack between the building and span clamp, and add drag on the drop wire reel. Place a temporary drop wire

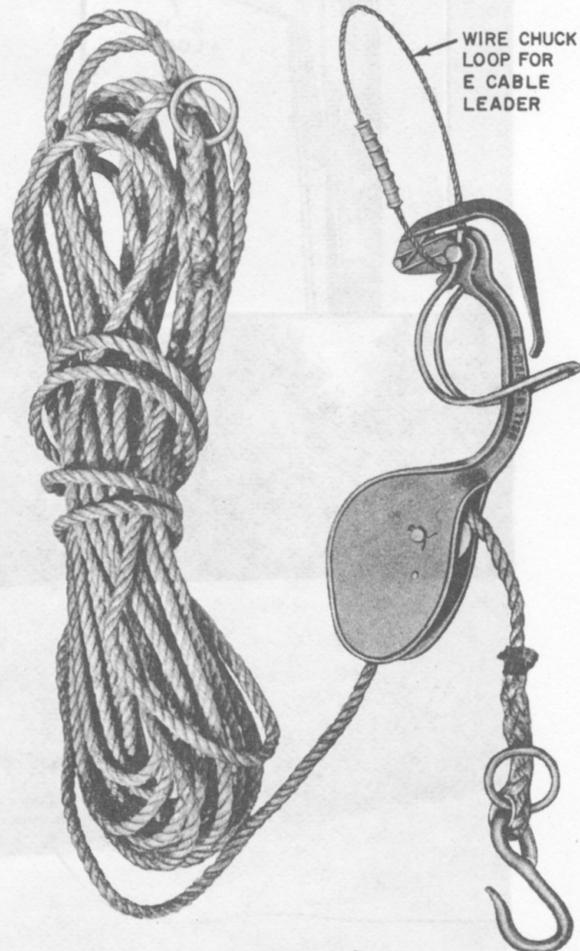


Fig. 7—B Aerial Handline

clamp on the drop wire at an extended arms distance from the building as shown in Fig. 8.

Pull the drop wire into position at the building attachment from the ground with the aerial



Fig. 8—Locating Temporary Drop Wire Clamp

handline as illustrated in Fig. 9. Proceed carefully to ensure that the drop wire is clear of all objects

or pedestrians when raising the wire to the building attachment.



Fig. 9—Raising Drop Wire to Building Attachment

(10) When the drop wire is raised to its approximate final stringing sag (462-400-200), move the rope of the B Aerial Handline in a lateral motion to activate the automatic locking device on the handline to hold the drop wire in the raised position. The craftsman may then ascend the ladder to make the permanent building attachment. Install the permanent drop wire clamp on the drop wire and the building attachment as shown in Fig. 10.

(11) Remove the B Aerial Handline from the building attachment and remove the temporarily installed drop wire clamp from the tensioned drop wire to complete the building attachment.

(12) Complete all other pole and building attachments and terminate the drop wire as described in other practices of the 462 Division.

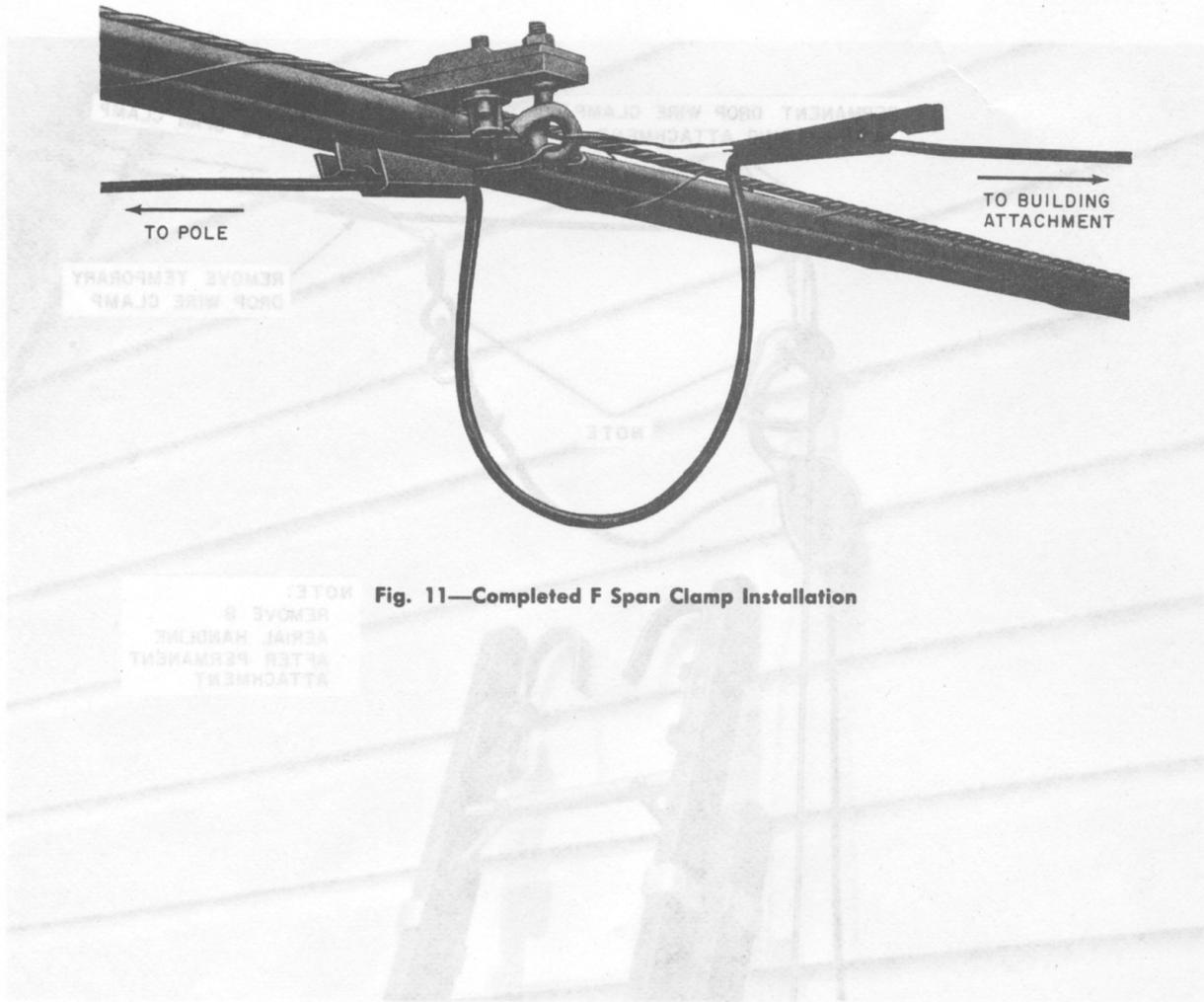


Fig. 10—Completing Permanent Building Attachment

Figure 11 illustrates the completed mid-span clamp attachment. Note the position of the drop wire clamp toward the building. It ensures against accidental disengagement of the drop wire clamp supporting the drop wire toward the pole or distribution cable terminal. Limit F Span Clamp attachments to **two** drop wires or to **one** six-pair multiple drop wire.

**4. REMOVING F SPAN CLAMP**

**4.01** To remove an F Span Clamp first remove the building and pole attachments. Then a ladder must be placed against the cable suspension strand or an aerial lift truck used. A C Screwdriver is placed through the radial holes of the clamp screw. The clamp is then removed by backing off the clamp screw.



**Fig. 11—Completed F Span Clamp Installation**