

**BELL SYSTEM PRACTICES**  
**Outside Plant Construction**  
**and Maintenance**

**SECTION G23.144.1**  
**Issue 1, September, 1956**  
**AT&T Co Standard**

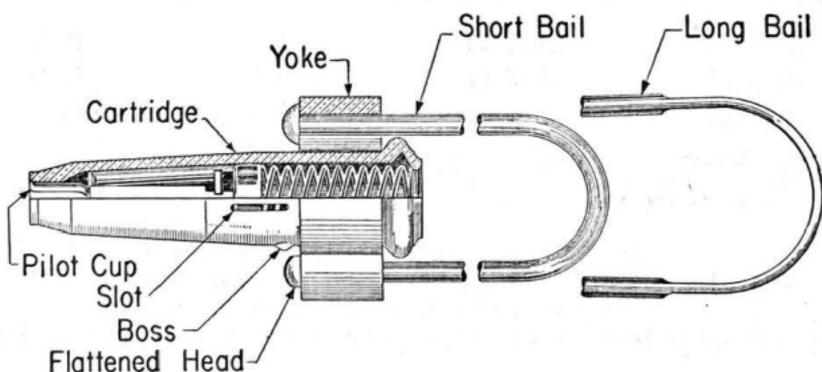
## STRANDVISE

### 1. GENERAL

- 1.01 This section describes the strandvise and the method of installing it when placing guys.
- 1.02 Strandvises may be used to dead-end guy strand at guy bolts, eye nuts, strain insulators and guy rods as an **alternate** for 3-bolt guy clamps.
- 1.03 The strandvise should **not** be used in sea coast locations where extreme conditions of salt spray and fog may be encountered and in any other severe corrosive locations as indicated on construction plans or by other specific instructions.

### 2. DESCRIPTION

2.01 Each strandvise consists of an aluminum cartridge, containing a spring loaded three jaw chuck, linked to a stainless steel bail by an aluminum yoke. To facilitate insertion of the strand a pilot cup is provided at the outer end of the cartridge which prevents spreading of the individual wires as the end of the strand passes through the chuck. The cartridge also has an embossment to keep it from slipping out of the yoke during installation and a slot to permit removal of the strand from the jaws when necessary. On the short bail one head is flattened to facilitate insertion through eye-type hardware.



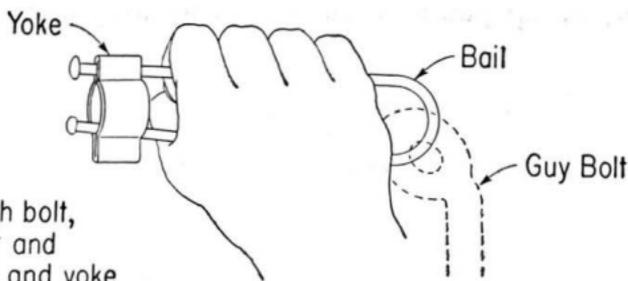
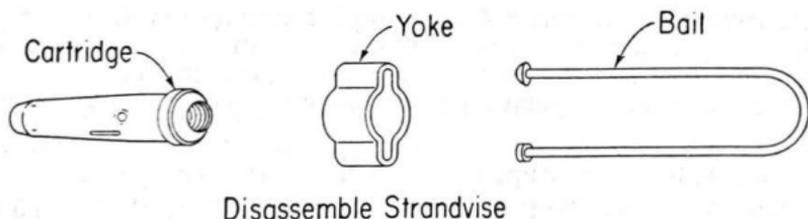
2.02 There are three sizes of strandvises and each size may be obtained with either a short or long bail. The short bail strandvise is for use with eye-type hardware and the long bail strandvise is for use with strain insulators.

Strand Size	Strandvise Size	Over-all Length	
		Short Bail	Long Bail
6M	5/16"	9-7/8"	13-1/8"
10M	3/8 "	11-3/8"	13-5/8"
16M	7/16"	11-7/8"	14-0 "

2.03 Strandvises are intended to be used with new galvanized strand, however, corroded strand that has been inspected and is to remain in plant may also be terminated with strandvises. Loose rust and scale should be removed from the strand by emery cloth before installation. The 5/16-inch strandvise can be used with 6M corrosion resistant strand. **Do not use** the 3/8-inch or 7/16-inch strandvises with corrosion resistant strand.

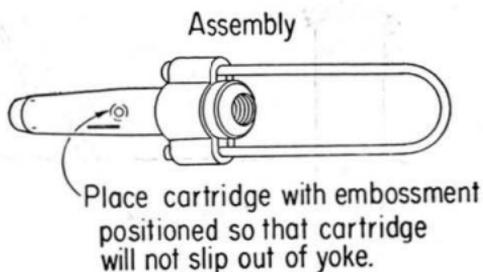
### 3. INSTALLATION

3.01 Install strandvises at eye-type hardware and strain insulators as follows:



Place bail through bolt, rod or insulator and reassemble bail and yoke

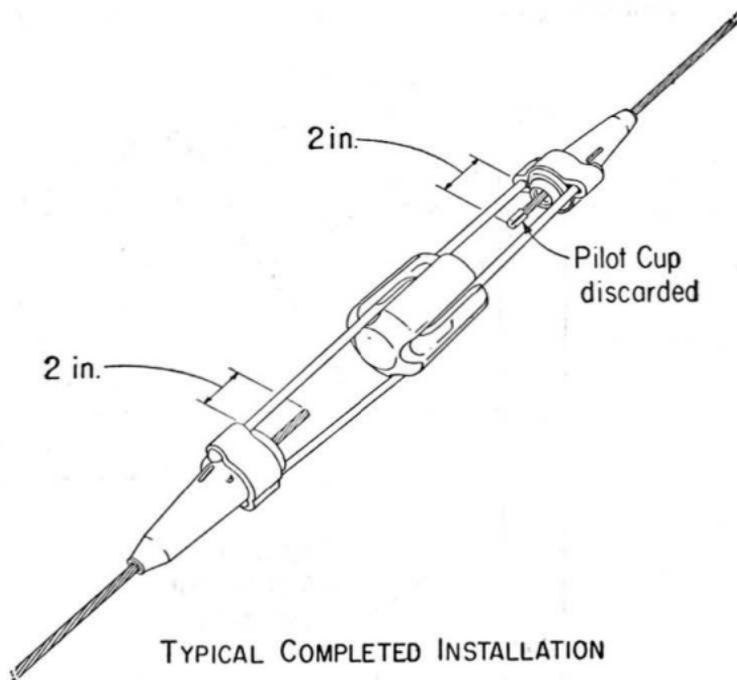
**CAUTION:** TO AVOID INJURY KEEP HAND OR FINGER AWAY FROM YOKE WHILE SQUEEZING BAIL THROUGH YOKE OPENING.



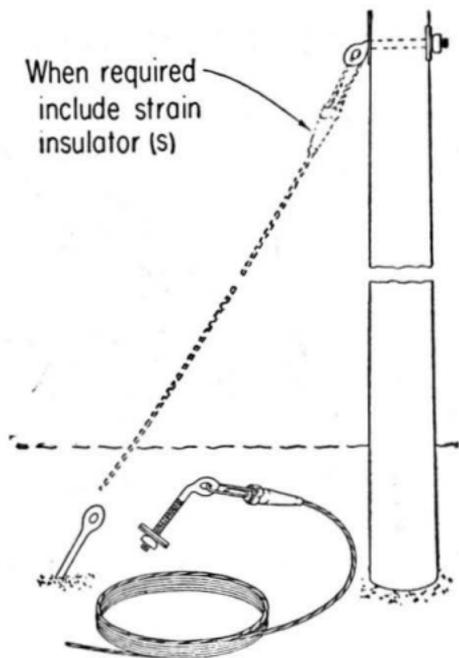
Check strand end. If it is deformed or unravelled cut off a length sufficient to insure that strand which will be placed into the strand vise is in good condition. Before cutting, straighten the strand to remove coil curvature.

Tape strand about 1/2 inch from where it is to be cut to prevent unravelling. Cut strand and remove tape.

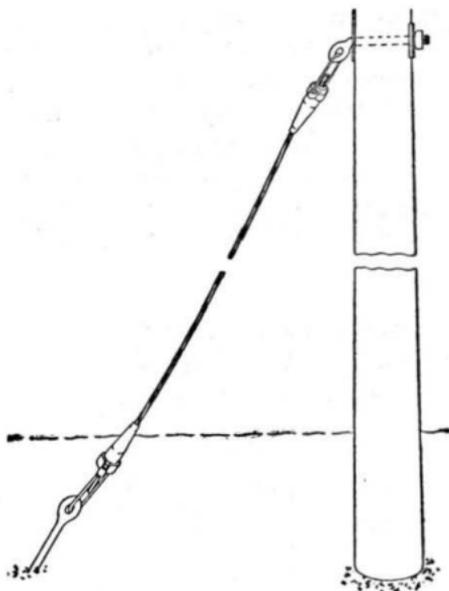
Insert end into pilot cup and push strand through cartridge until it extends about 2 inches beyond cartridge.



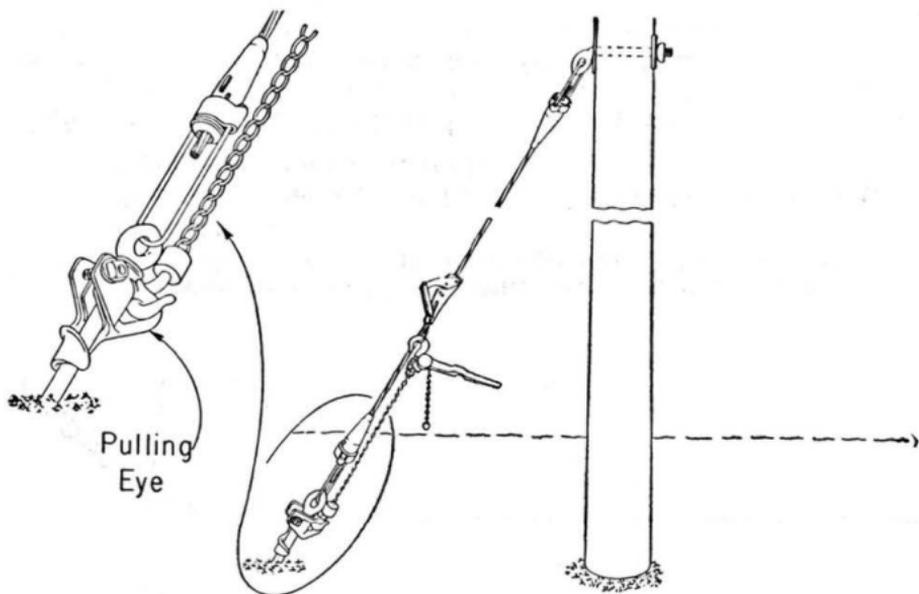
3.02 Install **anchor guys** as follows:



Assemble strandwise to pole top hardware and complete pole top installation. **Do not** cut strand.

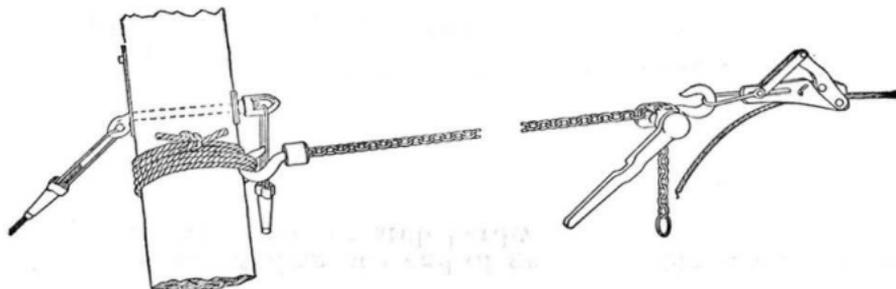


Assemble strandwise to eye of guy rod. Measure strand hand tight to large end of cartridge—tape and cut. Remove tape—insert end into pilot cup and push strand through cartridge hand tight.

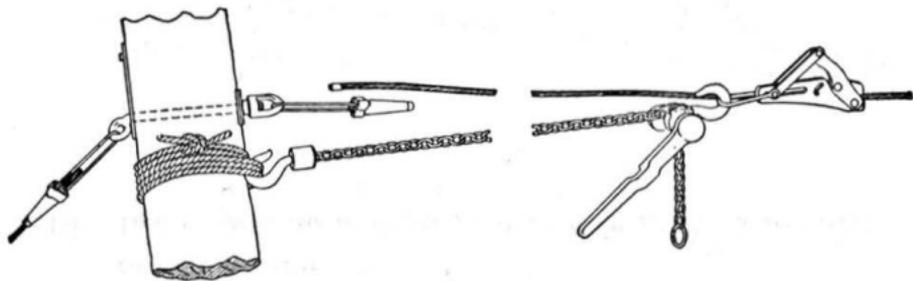


Assemble pulling eye on guy rod and place strand puller on guy. With chain hoist apply tension desired and feed strand through cartridge. Release tension in hoist so as to set jaws of strandwise and check guy tension. Remove upper hook of hoist first, then complete removal of all tools.

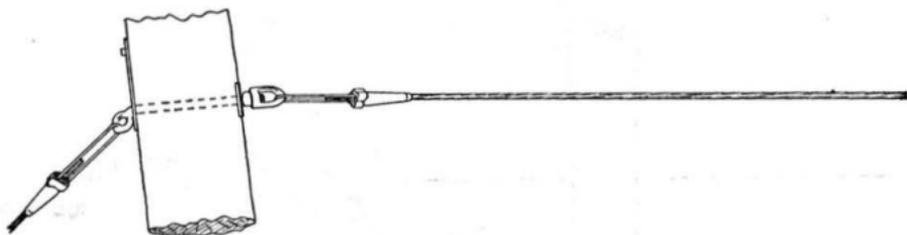
- 3.03 Follow same procedure when installing the second guy onto the same guy rod.
- 3.04 Install **pole to stub or pole to pole** guys as follows:



After installing one end of guy, assemble strandwise to the other pole or stub hardware.



Using rope sling, strand puller and chain hoist apply tension desired. Measure length of strand required to reach about 1-1/2 inches beyond large end of cartridge and tape. Cut strand 1/2 inch beyond tape.



Remove tape and insert end into pilot cup—feed strand through cartridge. Release tension in hoist to set jaws of strandwise.

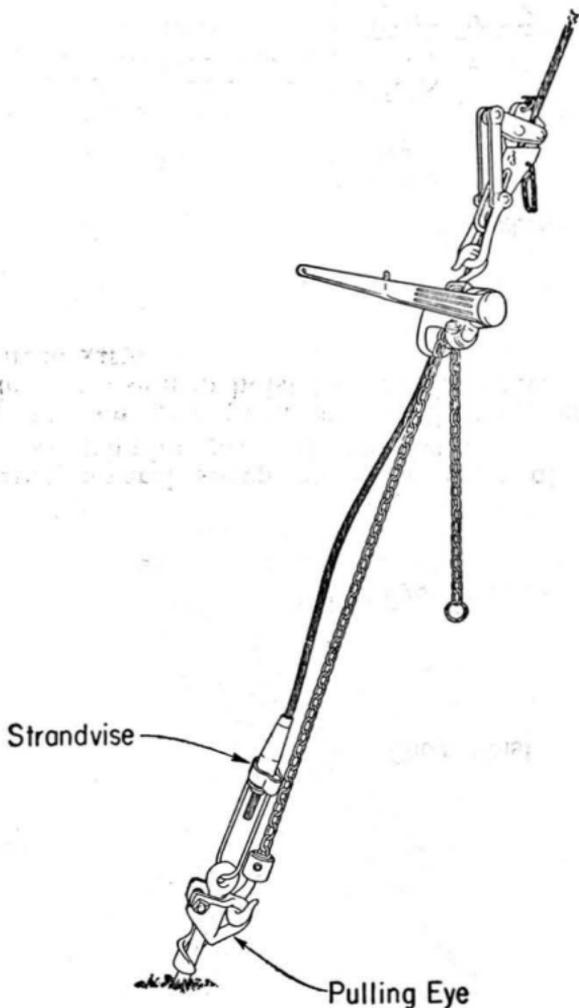
Remove outer end of hoist and strand puller first then complete removal of tools.

3.05 If preferred, block and tackle may be used in tensioning guys in lieu of a chain hoist; but the tension on the Pulling Eye should not exceed **5000** pounds.

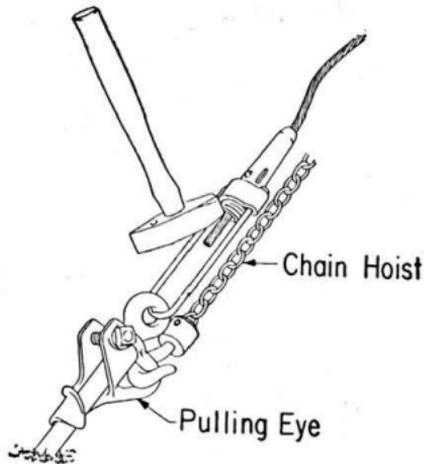
#### 4. REMOVAL

4.01 In removing strandvises there are two basic methods depending upon whether the guy is being retensioned or removed.

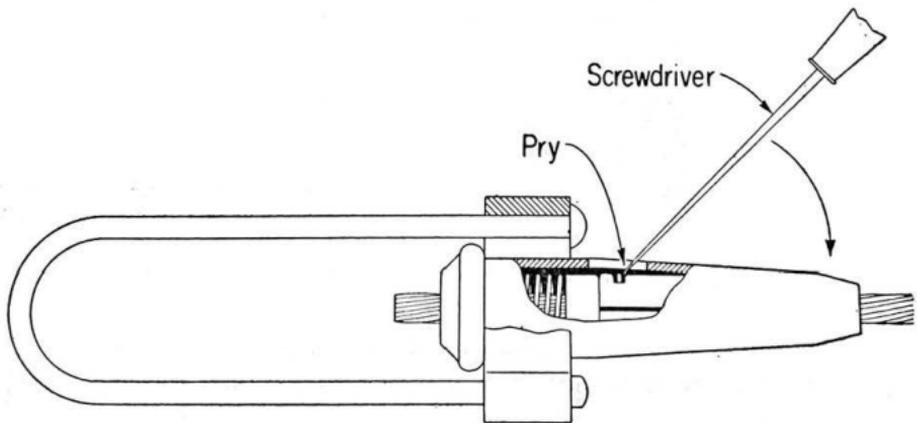
4.02 To retension a guy when it is terminated by means of strandvises proceed as follows:



Apply tension until section of strand between chain hoist hooks is slack.



Strike several sharp blows to back of cartridge to **unseat** gripping jaws of strand vise. To **tighten** guy push strand through cartridge and release tension in hoist to reset jaws. Repeat operation if necessary.



To **slacken** guy turn strand until interval between jaws can be seen through slot. Using 109E wire or small screwdriver as a pry, hold back washer and jaws while strand is let out. Release tension in hoist to reset jaws. Repeat operation if necessary.

**Caution: Leave a minimum of 1/2 inch of strand extending from cartridge, otherwise cut and piece out strand to proper length.**

4.03 When the guy is to be completely removed or replaced follow all the **Precautions** and **Safe Procedures** on Guy and Pole Removal as outlined in other sections and then proceed to remove the strandwise as follows:

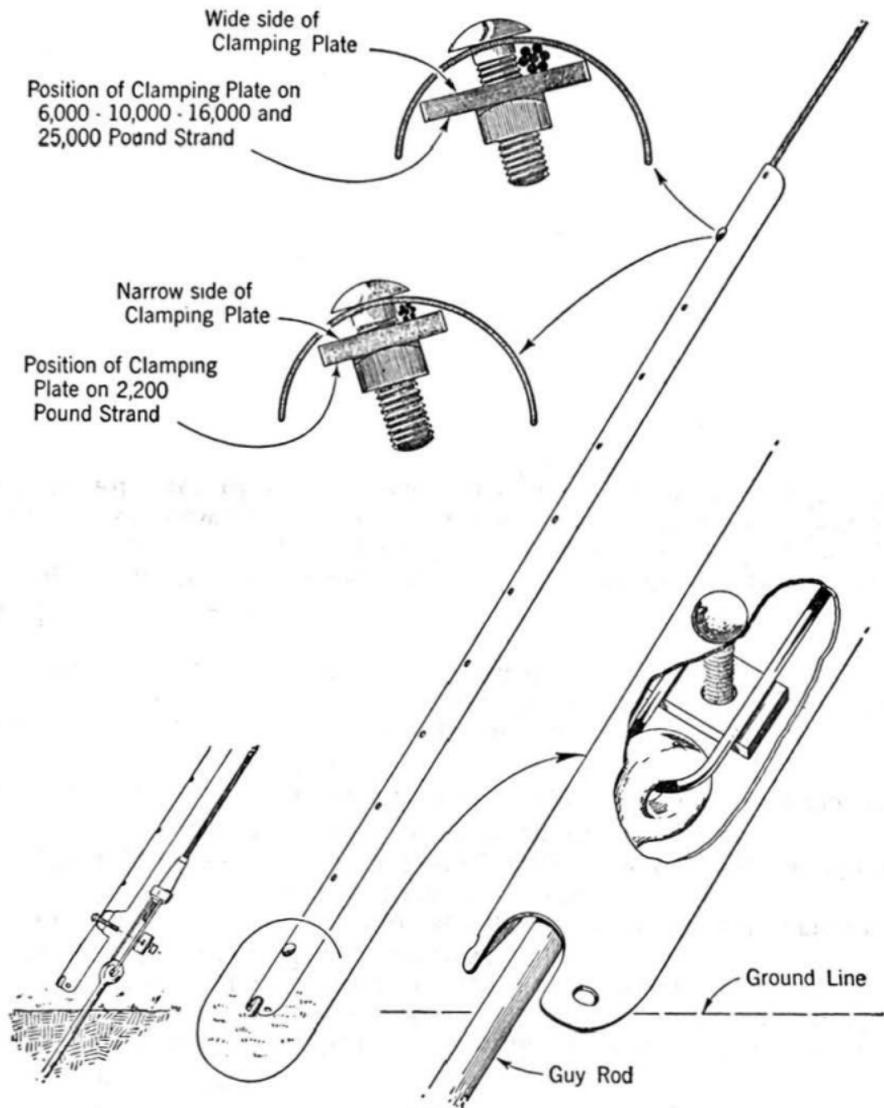
- (1) Obtain slack around strandwise and unseat gripping jaws as covered in Paragraph 4.02.
- (2) Cut strand about 3 inches above or beyond cartridge and push it completely through the cartridge.
- (3) Disassemble strandwise and complete removal or replacement of the guy.

4.04 If necessary to lengthen the guy, a strandlink may be used unless the strand should be replaced because of corrosion, change in size or other reason.

## **5. GUY SHIELDS**

5.01 The B guy shield, which is of light design and is intended for use where it will not be exposed to injury from heavy blows such as might result from contacts by vehicles, will fit all sizes of strandvises and can be installed as follows:

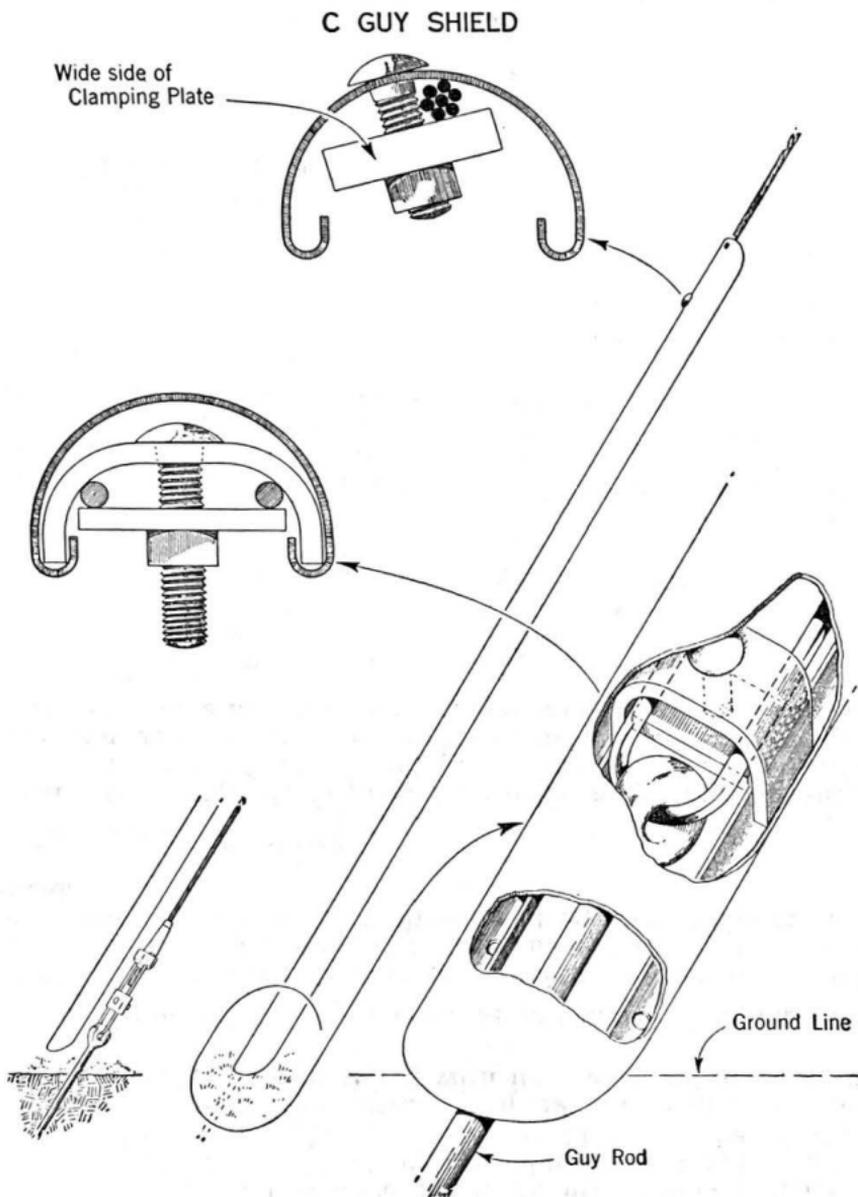
## B GUY SHIELD



Place shield on the guy with lower end at or as near the ground line as practicable and locate bolt for lower clamping device through bail of strandwise. Place washer and tighten nut.

Secure upper clamping device with clamping plate turned to the position indicated for size of strand.

5.02 The C guy shield, which is of heavy design and is intended for use at locations where traffic conditions are such that frequent replacement of the lighter B type would probably be necessary, will fit all sizes of strandvises and can be installed as follows:



Loosen and remove lower clamping device from guy shield. Place this clamp assembly through bail of strand-vise finger tight. Slide guy shield over yoke of strand-vise and engage lower clamping device in side grooves of shield. Place shield with its lower end at or as near the ground line as practicable.

Tighten lower clamp and secure upper clamping device.

5.03 Although it is generally not required, the lower end of either shield may, if desired, be secured to the guy rod by means of lashing wire through the punched holes in the shield.

## 6. GROUNDING GUYS

6.01 For purposes of grounding guys, as covered in another section of the Construction Practices, the strandvise **does** provide electrical continuity and may be considered similar to the strand and 3-bolt guy clamp method of installation in this respect.