

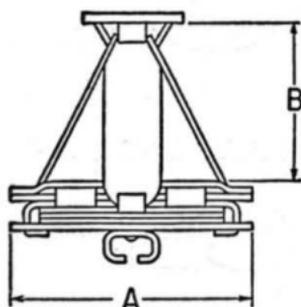
PATENT GUY ANCHORS EXPANDING ANCHORS

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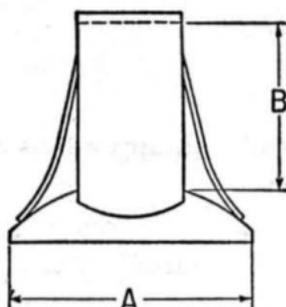
1. DESCRIPTION

1.01 Expanding guy anchors are of two general types, as shown in Fig. 1.

- A horizontal blade type (H) equipped with either three or four blades and arms for expanding the blades.
- An inclined blade type (I) with either four or eight blades. The striking surface and blades are integral.



Horizontal Blade Type (H)



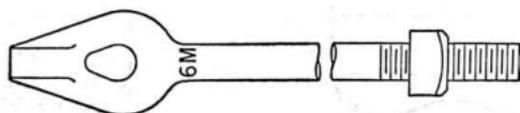
Inclined Blade Type (I)

A - Diameter of Anchor
B - Travel Distance in Expanding

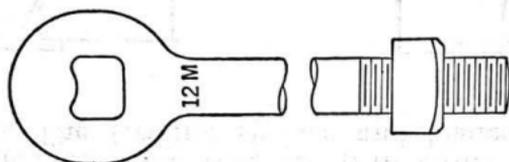
Fig. 1

2. GUY RODS

2.01 Guy rods, illustrated in Fig. 2, are made of galvanized steel for general use or of corrosion-resistant steel (CR) for use in areas where corrosion is severe.



S OR CRS GUY ROD (S for single thimble eye)



D OR CRD GUY ROD (D for double thimble eye)

Fig. 2

2.02 Guy rods are marked, as illustrated in Fig. 2, just below the eye with raised characters to show the maximum size or combination of sizes of strand recommended for use with them. For example, a rod marked 12M may be used with one 10M or two 6M guys.

2.03 The sizes of rods, their marking and the strand sizes recommended for use with them are shown in the following table:

Size		Marking	Strand Sizes
Diam. (in.)	Length (ft.)		
1/2	7	6M	2.2 or 6M
5/8	8	12M	10M or 2-6M
3/4	9	16M	16M or 1-6M and 1-10M
1	10	26M	2-10M, 25M or 1-10M and 1-16M
1-1/4	10	32M	2-16M

2.04 The 1/2-inch by 7-foot size is furnished with a single thimble eye. All other sizes are furnished with a double thimble eye.

3. SIZES AND USE OF EXPANDING ANCHORS

3.01 Equip and set expanding guy anchors as follows:

<u>Type</u>	<u>Diameter of Anchor and Hole</u>	<u>Size of Guy Rod</u>		<u>Size of Guy Strand</u>
	(In.)	Diam. (In.)	Length (Ft.)	
H 3 way I 8 way	6	1/2	7	2.2M or 6M
H 3 way I 8 way	8	5/8	8	10M or 2-6M
H 3 way I 8 way I 4 way	10	3/4	9	16M or 1-6M and 1-10M
H 4 way	12	1	10	2-10M, 25M or 1-10M and 1-16M
H 4 way	12	1-1/4	10	2-16M

4. INSTALLATION

4.01 The small screws or wires used to hold the blades to the plate of an inclined blade anchor should not be removed. They will be sheared off by the anchor tamping bar at the time such anchors are expanded. The blades of the horizontal blade-type anchor should be free to move before placing in the hole.

4.02 Where practical, use earth augers to bore holes for the installation of anchors. Expanding guy anchors develop a major portion of their holding power by the blades engaging undisturbed earth in the sides of the hole. **It is therefore important that the hole should be no larger than necessary to admit the unexpanded anchor.**

4.03 Expanding anchors are installed by:

- (a) Digging a vertical hole to the required depth, then slotting over to align guy rod with guy as shown in Fig. 3. The slot should be made before anchor is placed in

hole. The dimensions of D, S and R shown in Fig. 3 are approximately as follows when $\frac{\text{Lead}}{\text{Height}} = 1$ and $\frac{\text{Lead}}{\text{Height}} = \frac{1}{2}$:

Length of Rod	$\frac{\text{Lead}}{\text{Height}} = 1$			$\frac{\text{Lead}}{\text{Height}} = \frac{1}{2}$		
	R ft.-ins.	D ft.-ins.	S ft.-ins.	R ft.-ins.	D ft.-ins.	S ft.-ins.
7	6-6	4-7	4-7	6-0	5-5	2-8
8	7-6	5-4	5-4	7-0	6-4	3-1
9	8-6	6-0	6-0	9-0	7-2	3-7
10	9-6	6-8	6-8	10-0	8-1	4-0

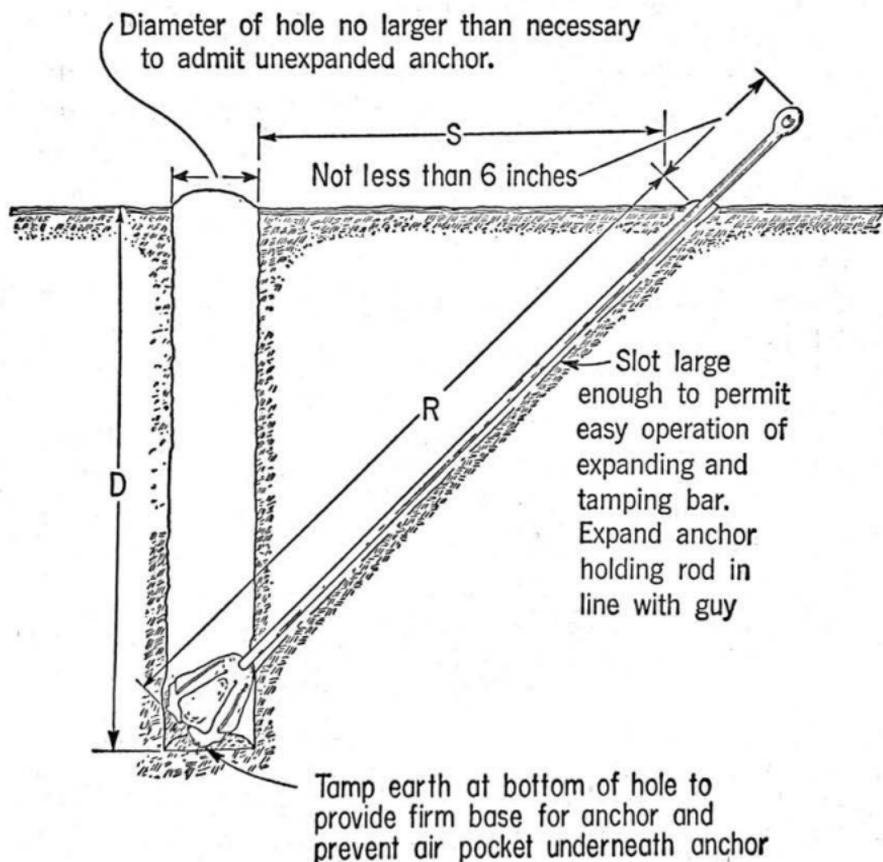


Fig. 3

(b) When soil conditions, location and type of digger permit, boring the hole at an angle so that the guy rod will be aligned with the guy as shown in Fig. 4.

After unexpanded anchor has been placed at bottom of hole, place expanding bar on guy rod and make a mark on guy rod near the ground line. On expanding bar make two marks, - the lower one in line with that on the rod and the upper one at a distance equal to the travel of the top of the anchor in going from the unexpanded to the fully expanded position.

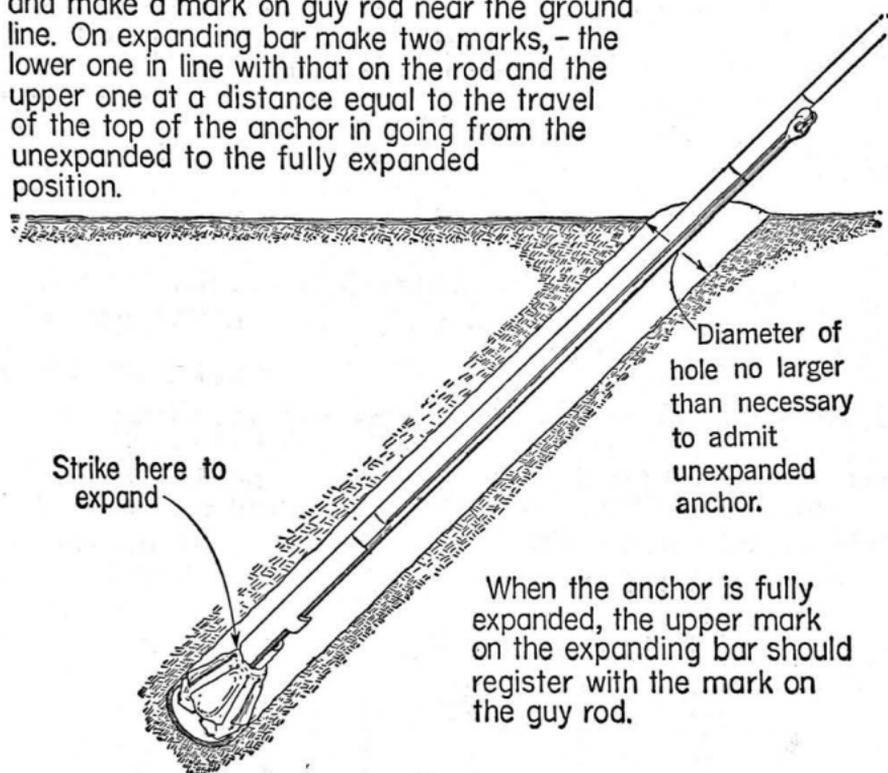


Fig. 4

- 4.04 Before placing anchor in hole, be sure the nut on the guy rod is screwed tight against anchor.
- 4.05 Expand anchor with expanding bar as described in Fig. 4.
- 4.06 Backfill, tamping earth firmly throughout depth of hole.