BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G32.114.3
Issue 3, March, 1961
AT&TCo Standard

DROP AND BLOCK WIRING

EQUIPPING AND INSTALLING INTERMEDIATE ATTACHMENTS ON BUILDINGS AND STRUCTURES

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1. GENERAL

1.01 This section covers the installation of intermediate drop and block wire attachments such as drive rings, bridle rings, etc, on building walls. It also includes equipping and installing insulator supports and beam clips on steel structures.

1.02 This section is reissued to:

(a) Reclassify E, C, A and F size Bridle Rings to C Bridle Rings in sizes 7/8", 1-1/4", 1-5/8" and 3", respectively.

(b) Introduce the B Bridle Ring and the B Beam Clip.

(c) Include information regarding B Wire Loops (installed with suitable D Masonry Fasteners) and intermediate attachments on steel structures.

1.03 The B Bridle Ring is an open type ring similar to the closed type M Bridle Ring. A machine screw 10-24 thread is provided at one end for use with insulator supports or B Beam Clips. **The open ring feature facilitates the placing of drop, block or station wire with the use of a wire raising tool.**

1.04 The B Beam Clip can be used with drive rings or machine threaded bridle rings to support drop wires on structural framework for intermediate attachments.

1.05 The 5/8"L, 7/8"L and 1-1/4"L drive rings are equipped with nails 1/2" longer than those used in regular similar sizes. They are intended for use on building walls covered with thick siding materials through which adequate penetration cannot be obtained with regular rings.

2. WIRE CARRYING CAPACITIES OF DRIVE RINGS WIRE LOOPS, BRIDLE RINGS AND INSULATED SCREW EYES

2.01 The wire carrying capacities of the various sizes of drive rings, wire loops, bridle rings and screw eyes in terms of standard neoprene-jacketed drop and block wires are shown in TABLE A.

TABLE A

TYPE OF RING OR INSULATED SCREW EYE	SIZE	MAXIMUM NUMBER OF WIRES		
		NP OR C DROP WIRE	HD WIRE	BLOCK WIRE
DRIVE RINGS	1/2 IN.	2	2	3
	5/8 IN. AND 5/8 IN. L*	6	4	9
	7/8 IN. AND 7/8 IN. L*	16	11	22
	1-1/4 IN. AND 1-1/4 IN. L*	30	18	40
# B WIRE LOOPS	NO. 1/2	2	2	3
	NO. 5/8	6	4	9
	NO. 7/8	16	11	22
	NO. 1-1/4	30	18	40
C BRIDLE RINGS	7/8 IN.	6	4	9
	1-1/4 IN.	16	11	22
	1-5/8 IN.	30	18	40
	3 IN.	100	58	140
B OR M BRIDLE RING	1-1/4 IN.	16	11	22
INSULATED SCREW EYES	5/8 IN. S AND L*	4	3	7
	1 IN. S AND L*	10	6	16

* L REPRESENTS LONGER SHANK.

INSTALL WITH SUITABLE D MASONRY FASTENERS. SEE FIG. 2.

3. INSTALLING DRIVE RINGS, WIRE LOOPS AND BRIDLE RINGS

3.01 Drive rings and wire loops (with suitable D Masonry Fasteners) should be used wherever metal rings are permitted by the Practices. Bridle rings may, however, be substituted for drive rings under the following conditions.

(a) Where point of drive ring nail would extend beyond the wood frame of a building contractor's shanty, etc.

(b) Where it is likely that clothing would catch on drive rings installed in narrow passageways, alleys, etc.

(c) Where property owner objects to drive rings.

(d) **Where drive rings are likely to split woodwork.**

(e) In situations where bridle rings can be used to better advantage than drive rings.

3.02 Typical installations of drive rings, wire loops (with suitable D Masonry Fasteners) and bridle rings on various types of wall construction are illustrated in Figs. 1, 2, 3 and 4.

Caution: When drilling holes or driving masonry fasteners into masonry or brick walls wear goggles.

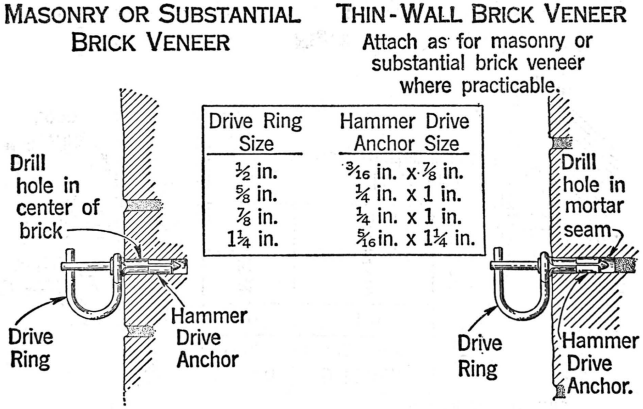
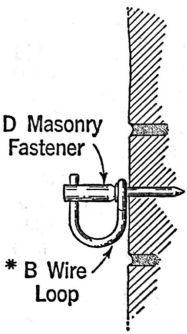


Fig. 1

MASONRY OR SUBSTANTIAL BRICK VENEER



B Wire Loop	D Masonry Fastener
No.	No.
½	3
⅝	4
⅞	5
1¼	5

THIN-WALL BRICK VENEER

Attach as for masonry or substantial brick veneer where practicable.

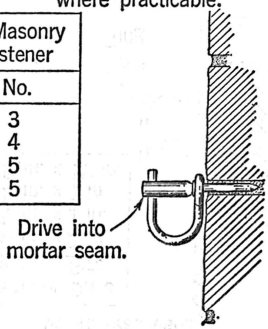
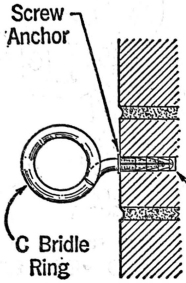


Fig. 2

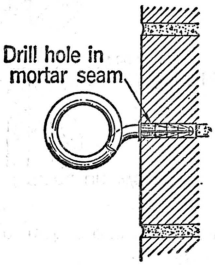
* B Wire Loops are supported by D Masonry Fasteners which are driven directly into masonry walls or mortar seams by means of hand operated drive tools. Refer to G 82 Series.

MASONRY OR SUBSTANTIAL BRICK VENEER



THIN-WALL BRICK VENEER

Attach as for masonry or substantial brick veneer where practicable.



C Bridle Ring Size	Wood Screw Anchor			
	Lead		Plastic	
	Screw Size	Length	No.	Length
⅞ in.	10-14	1 in.	12	1 in.
1¼ in.	10-14	1 in.	16	1 in.
1⅝ in.	10-14	1 in.	16	1 in.
3 in.	16-18	1½ in.	–	–

Fig. 3

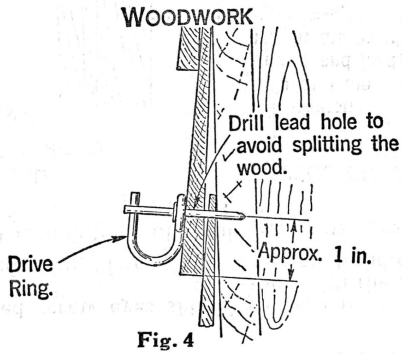


Fig. 4

Note: See 3.01 for bridle ring substitution.

4. INSTALLING INSULATED SCREW EYES AND C KNOBS

4.01 Insulated screw eyes should be used in place of drive rings or bridle rings in accordance with the instructions in the section covering "Drop Wire Runs on Buildings."

4.02 Typical installations of insulated screw eyes are shown in Fig. 5.

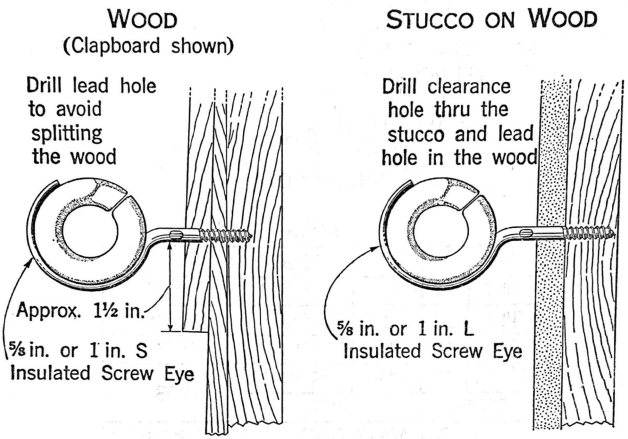


Fig. 5

4.03 The C Knob may be used where not more than two wires are to be placed. See Fig. 6.

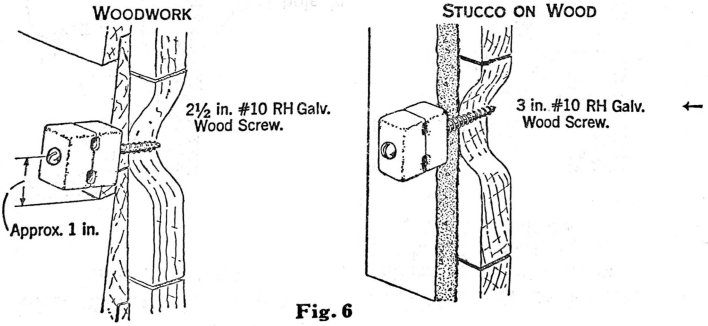
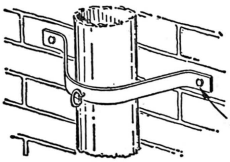


Fig. 6

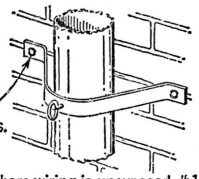
5. INSTALLING W LEADER BRACKET

5.01 The methods for installing the W Leader Bracket on various types of wall are indicated in Fig. 7.

MASONRY OR SUBSTANTIAL BRICK VENEER

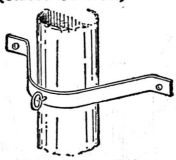


THIN-WALL BRICK VENEER
Attach as for masonry, when practicable.



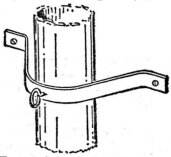
Where wiring is unexposed, #14 RH Galv. Wood Screw of length sufficient to penetrate wood sheathing approx. 1 in. may be used, if necessary.

HOLLOW TILE
(Stucco Covered.)



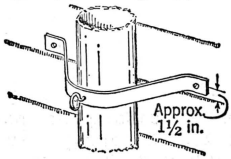
Two ¼ in. × 3 in. or 4 in. RH. Galv. Toggle Bolts.

STUCCO ON WOOD
(Unexposed Wiring Only.)



Two 2 in. #14 RH Galv. Wood Screws.

WOODWORK - Clapboard shown
(Unexposed Wiring Only.)



Two 1½ in. #14 RH Galv. Wood Screws.

Bracket will adequately clear obstructions extending five in. from wall surface.

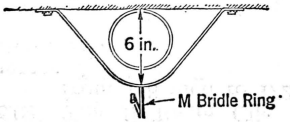


Fig. 7

6. EQUIPPING AND INSTALLING INSULATOR SUPPORTS AND B BEAM CLIPS ON STEEL STRUCTURES

6.01 Attachments for supporting drop wires to I beams, angle irons, etc, are secured with insulator supports and B Beam Clips.

6.02 The B Beam Clip can be used on flanges ranging from 1/8 inch to 1/2 inch thick as indicated in Fig. 8 whereas Insulator Supports can be used on flanges up to 1 inch thick.

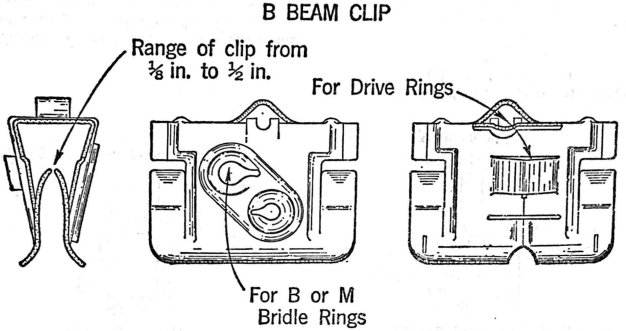


Fig. 8

6.03 Equip Insulator Supports and B Beam Clips as indicated in Fig. 9.

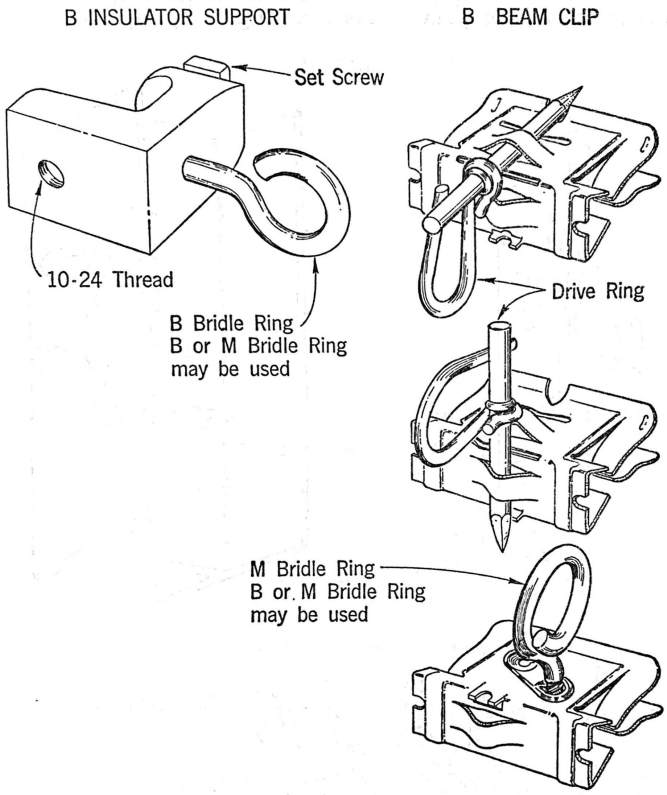


Fig. 9

6.04 Install Insulator Supports and B Beam Clips as shown in Fig. 10.

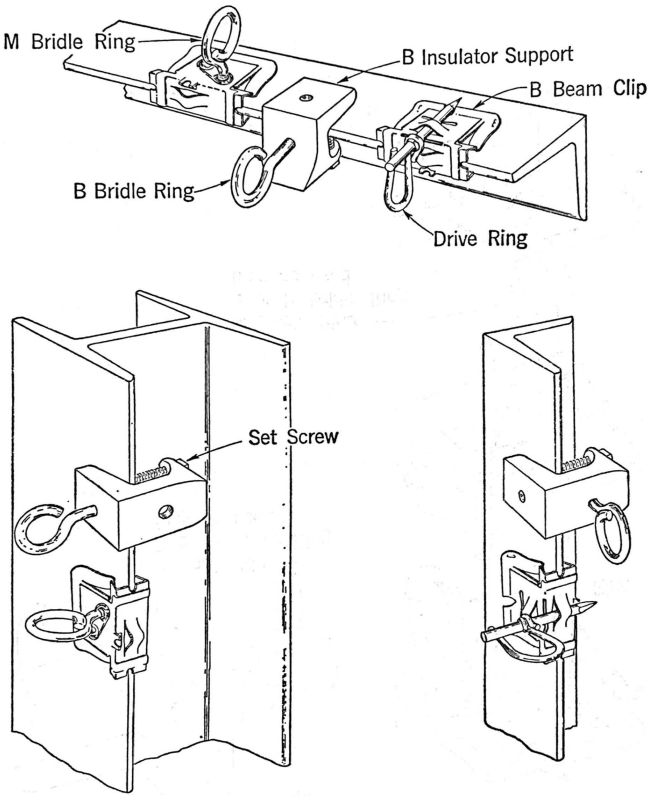


Fig. 10

Note: Insulator Supports are secured to steel structures by tightening set screws. The B Beam Clips are held secured by spring tension of the clip. On thick flanges the B Beam Clip may require driving into place with a hammer.