BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G80.801.3
Issue 2, July, 1957
AT&TCo Standard

TOOLS
LINEMEN'S CLIMBERS
INSPECTION

Contents **Page**

1. GENERAL

1.01 This section replaces Issue 1. It has been revised to cover the inspection of all types of Linemen's Climbers and to describe the C Gaff Gauge which is used to determine whether climber gaffs are of the proper dimensions.

2. INSPECTION OF CLIMBERS

2.01 Each employee shall assume the responsibility of determining that his climbers are in good condition and shall inspect the gaffs to detect nicks or dulled cutting edges each time that he uses the climbers. Furthermore, upon the receipt of the climbers, and at least once a week thereafter, he shall inspect the climbers in accordance with Paragraph 2.03 to detect any flaw that may have developed.

2.02 The employee's supervisor shall make an inspection of the climbers at intervals of not more than three months.

2.03 The important conditions to look for when inspecting linemen's climbers are as follows:

(a) Fractured gaff or hairline crack.
(b) Loose gaff.
(c) Length of gaff less than 1-1/8 inch, measured along the inner surface.
(d) Broken or loose strap loops and rings.

(e) Fractured leg iron or start of fracture.

(f) Fractured adjustable sleeve or start of fracture.

(g) Nicks and depressions in gaff due to impact with a hard object.

(h) Deep file marks in gaff.

(i) Dull gaff.

(j) Difference of more than 1/8 inch in the lengths of the gaffs of a pair of climbers.

(k) Improperly-shaped gaff.

(l) Loose screw or rivet on adjustable sleeve.

2.04 If any of the conditions (a) to (f), inclusive, of Paragraph 2.03 are found, or if the condition of the climbers is such that there is any doubt as to their safety, the climbers should be exchanged at once for a pair in good condition.

2.05 If any of the conditions (g) to (k), inclusive, of Paragraph 2.03 are found, they should be corrected as outlined in the section on Climber Sharpening. If condition (1) is found the screw or rivet should be tightened or replaced. If in sharpening, the gaffs are reduced to a length of less than 1-1/8 inch, the climbers should be exchanged at once for a pair in good condition.

2.06 The following illustrations show the dimensions and contours of a properly-shaped gaff. The C Gaff gauge should be used to check all dimensions, (a) to (e) inclusive. The rounded contour of the outer surfaces (f) may be checked by visual inspection. The use of the C Gaff Gauge is outlined in Part 4.

(a) Length of gaff.

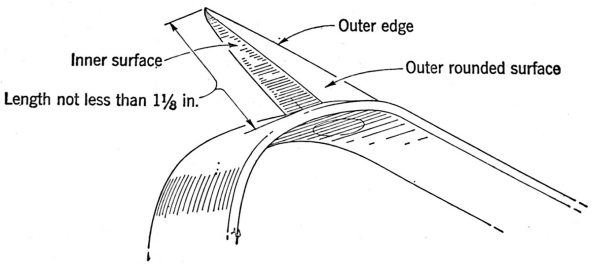

FIG. 1

(b) Thickness of gaff 1 inch and 1/2 inch from the point.

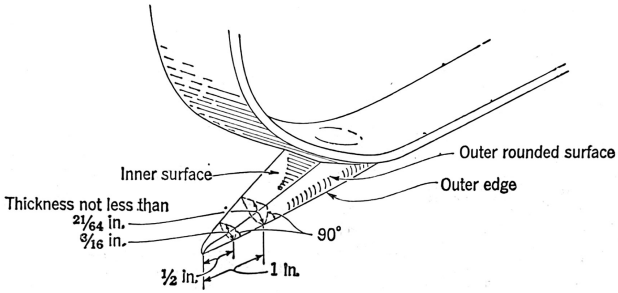

FIG. 2

(c) Width of gaff 1 inch and 1/2 inch from the point.

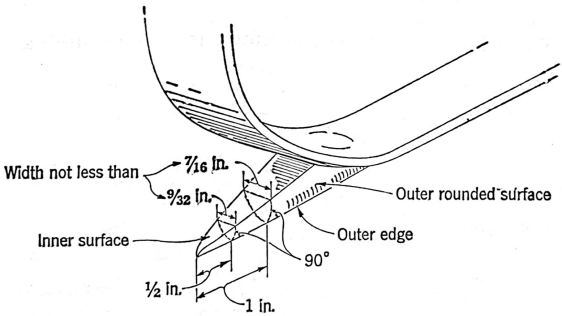

FIG. 3

(d) Width and thickness of gaff 1/16 inch from the point.

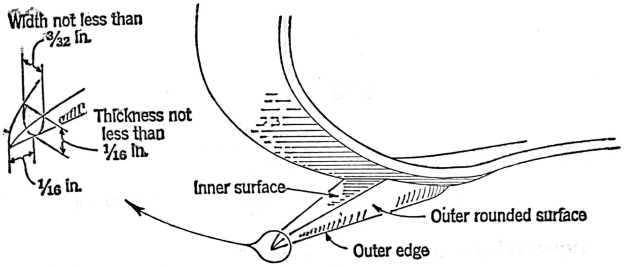

FIG. 4

(e) Profile of gaff at point and straightness of outer edge.

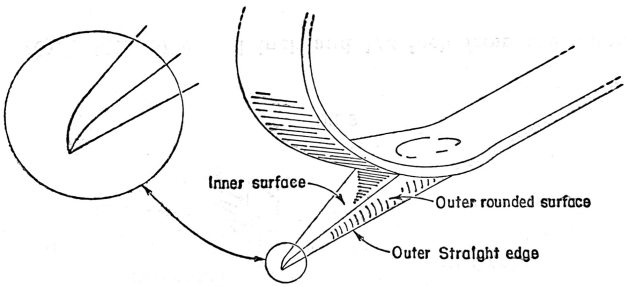

FIG. 5

(f) Rounded contour of outer surfaces.

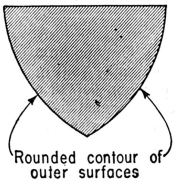

FIG. 6

2.07 The following illustrations show the four principal causes of climber cutouts due to unsatisfactory gaff conditions.

(a) Insufficient penetration resulting from a dull gaff.

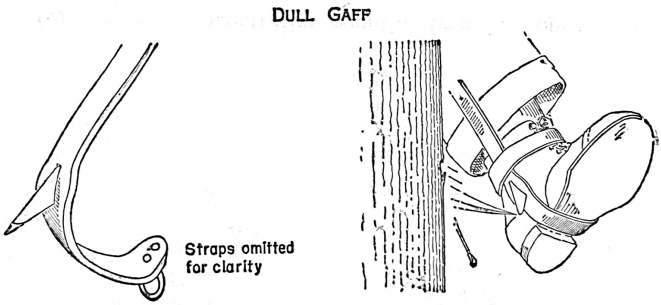

FIG. 7

(b) Insufficient penetration resulting from gaff being too short.

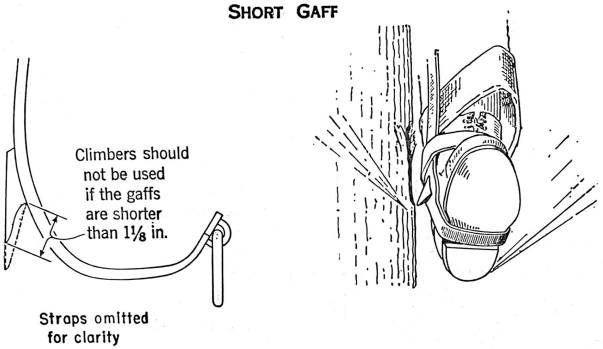

FIG. 8

(c) Ineffective penetration resulting from improperly shaped gaff.

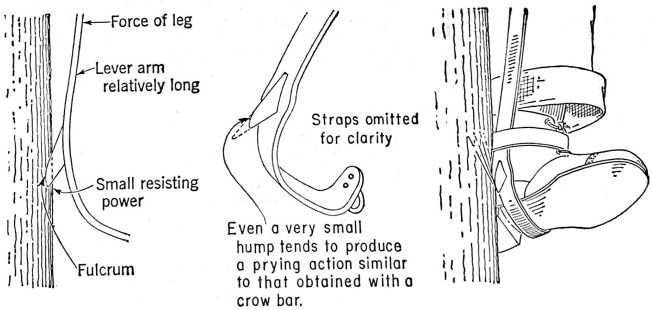

FIG. 9

(d) Spike pointed gaffs will cut out more readily than chisel pointed gaffs. Sharpening gaffs to a spike point also reduces the cross-sectional area at the tip and may cause gaff breakage.

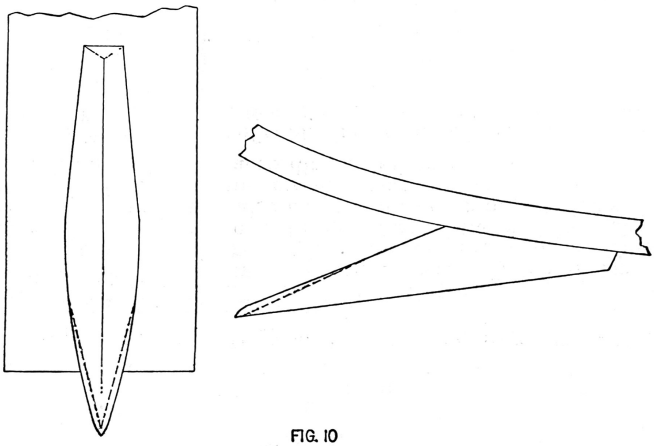

FIG. 10

3. DESCRIPTION OF C GAFF GAUGE

3.01 The C Gaff Gauge, shown in the following illustration is provided with openings which, in conjunction with the long reference lines stamped on the wide face and the outer edge of the gauge, are used for checking the thickness and width of the gaff 1 inch and 1/2 inch from the point. The short reference line, midway between the ends of the gauge, is used for checking gaff length. The small circular hole is used for checking gaff tip dimensions. The cutout in the outer edge of the wide face of the gauge is used to check the profile of the gaff at the tip and the straightness of the outer edge of the gaff.

TYPE C GAFF GAUGE

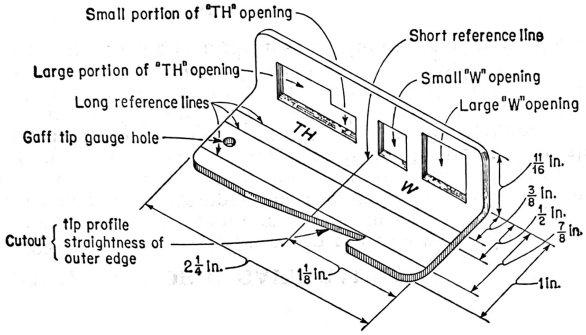

FIG. 11

4. USE OF C GAFF GAUGE

4.01 The C Gaff Gauge is intended primarily for use by employees, when resharpening all types of Linemen's Climbers, to determine if the gaffs have the required dimensions. The gauge may also be used for checking the dimensions of the gaffs of new and reissued climbers, and of gaffs which have been sharpened according to another C Gaff Gauge.

4.02 The eight significant dimensions of a gaff, which may be checked by means of the gaff gauge, are as follows:

(a) Length.
(b) Thickness 1 inch from the point.
(c) Thickness 1/2 inch from the point.
(d) Width 1 inch from the point.
(e) Width 1/2 inch from the point.
(f) Width and thickness 1/16 inch from point.
(g) Profile of gaff approximately 1/8 inch from tip.
(h) Straightness of outer edge of gaff.

4.03 To check the length of the gaff, place the lined face of the gaff gauge against the inner surface of the gaff with the edge of the gauge tight against the leg iron as shown in the following illustration. If the point of the gaff extends to or beyond the short reference line, the length of the gaff is satisfactory. If the point of the gaff falls short of this reference line, the length of the gaff is less than the desired minimum (1-1/8 inch) and the pair of climbers should be exchanged at once for a pair in good condition.

The climbers should also be replaced if the gaffs can not be sharpened so that the difference in their lengths is 1/8 inch or less.

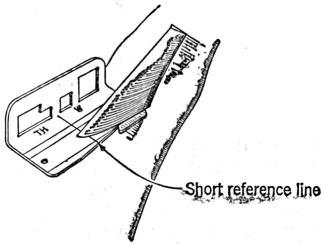

FIG. 12

4.04 To check the thickness of the gaff 1 inch from the point, insert the gaff through the large portion of the opening marked "TH" as far as it will go with the outer edge of the gaff resting against the lined face of the gauge as shown in the following illustration. If the point of the gaff falls at the far edge of the gauge or on the adjacent long reference line or between these points, the thickness of the gaff 1 inch from the point is satisfactory.

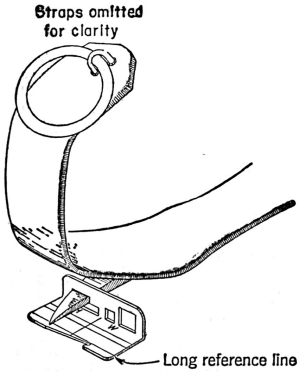

FIG. 13

4.05 To check the thickness of the gaff 1/2 inch from the point, insert the gaff through the small portion of the opening marked "TH" as far as it will go with the outer edge of the gaff resting against the lined face of the gauge as shown in the following illustration. If the point of the gaff falls on either of the two nearer long reference lines or between these lines, the thickness of the gaff 1/2 inch from the point is satisfactory.

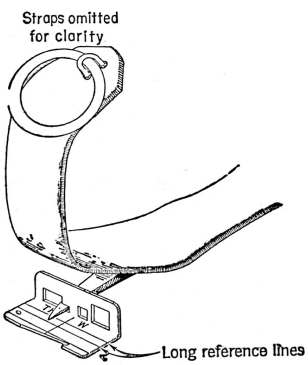

FIG. 14

4.06 To check the width of the gaff 1 inch from the point, insert the gaff through the larger of the two openings marked "W" as far as it will go with the outer edge of the gaff resting against the lined face of the gauge as shown in the following illustration. If the point of the gaff falls at the far edge of the gauge or on the adjacent long reference line or between these points, the width of the gaff 1 inch from the point is satisfactory.

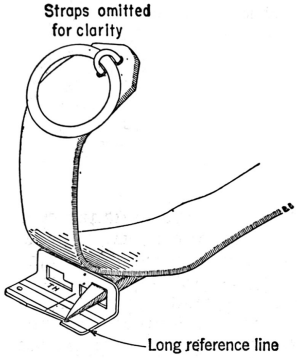

FIG. 15

4.07 To check the width of the gaff 1/2 inch from the point, insert the gaff through the smaller of the two openings marked "W" as far as it will go with the outer edge of the gaff resting against the lined face of the gauge as shown in the following illustration. If the point of the gaff falls on either of the two nearer long reference lines or between these lines, the width of the gaff 1/2 inch from the point is satisfactory.

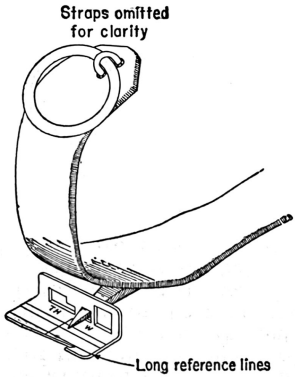

FIG. 16

4.08 To check the width and thickness of the gaff 1/16 inch from the point, insert the point of the gaff into the small hole in the gaff gauge. This operation should be performed carefully so as not to dull the gaff cutting edges. If the gaff point enters the hole but does not protrude above the other surface of the gauge, the width and thickness of the gaff 1/16 inch from the point is satisfactory.

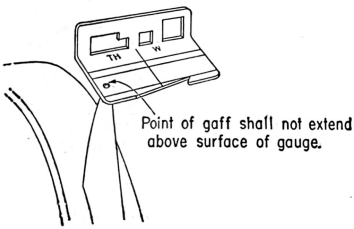

FIG. 17

4.09 To check the gaff profile at the tip insert the gaff in the cutout provided, as shown in Fig. 18. The curvature of the gaff tip should fit the curvature of the profile cutout in the gauge.

4.10 To check the straightness of the gaff at the outer edge, insert the gaff in the cutout provided to check the gaff profile (Fig. 18). If there is a perceptible bow within 1/2 inch of the gaff tip the climbers should be exchanged at once for a pair in good condition.

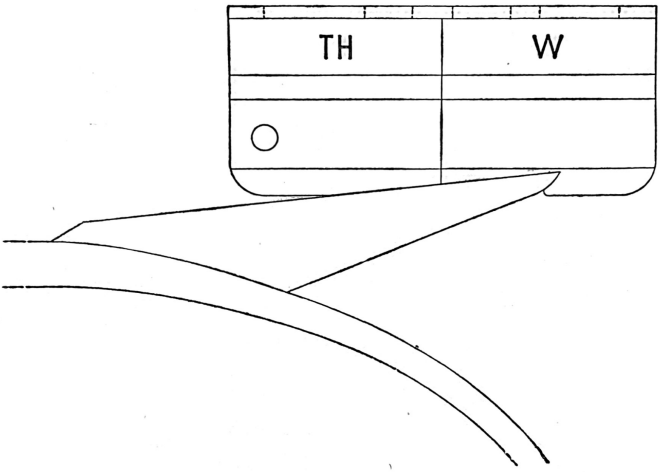

FIG. 18

4.11 If a gaff does not have the proper shape, as determined by gauging it with the gaff gauge, it should be resharpened until the proper dimensions are obtained. If after resharpening, either gaff is under the minimum length of 1-1/8 inch, the pair of climbers shall be exchanged at once for a pair in good condition.