

MEASURING HEIGHTS AND CLEARANCES

B HEIGHT FINDER

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1. GENERAL

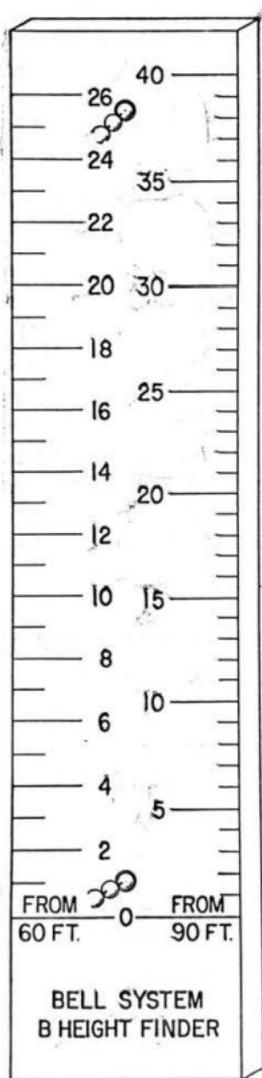
1.01 This practice describes the use of the B Height Finder for measuring heights of poles and pole attachments, vertical clearances between power and telephone plant, as well as clearances of wires and cables above ground.

1.02 The B Height Finder is not a precise instrument and must not be considered as such. It must not be used where extreme accuracy is necessary. If, when measuring vertical clearances between power and telephone plant, a 10% error could mean the difference between safe and unsafe conditions, then some other means of measurement should be used.

1.03 A more accurate reading may be obtained by taking several readings and using the average as an answer.

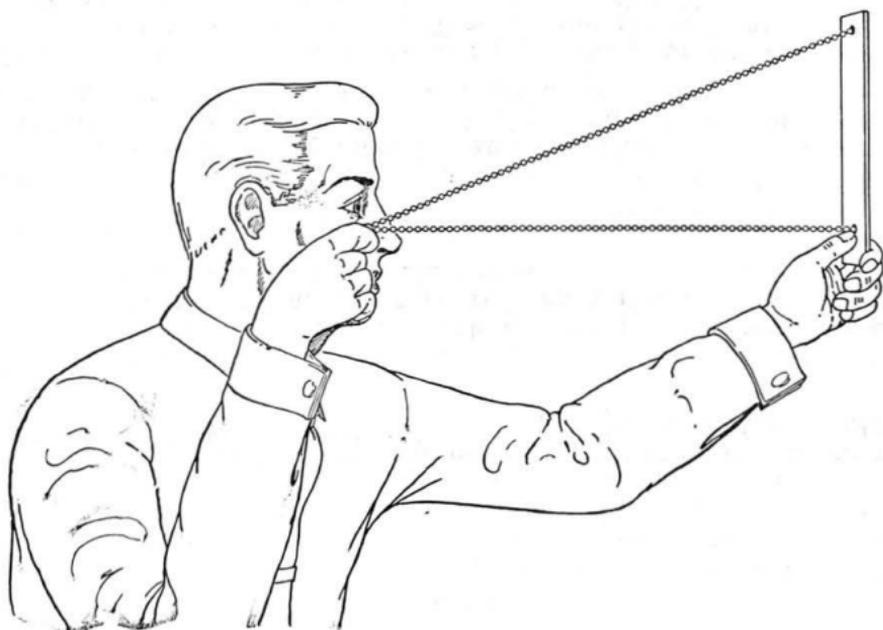
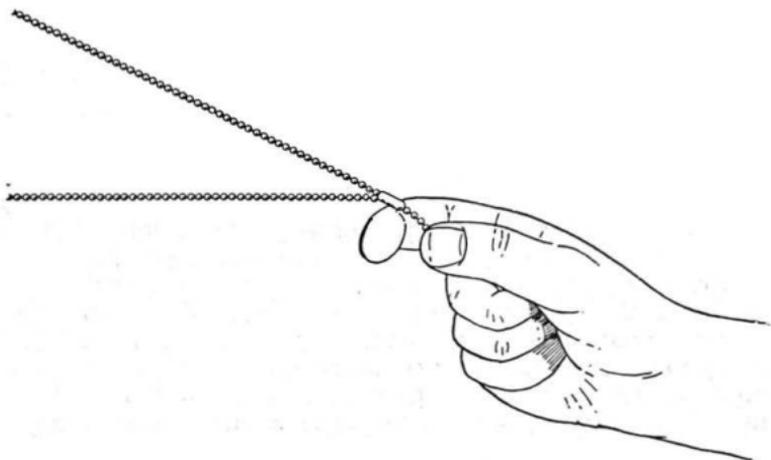
1.04 The B Height Finder consists of a white plastic strip having a length of 8-1/4 inches, a width of 1-3/4 inches and a thickness of 3/16 inches. The scale is calibrated along one edge to read from zero feet to 26 feet and along the opposite edge to read from zero feet to 40 feet for use when the observer is 60 feet and 90 feet, respectively, from the target. Chains, extending from near each end of the scale, are pro-

vided to insure holding the finder 15 inches from the eye and perpendicular to the base line of sight. Each finder is furnished in an envelope type of leather case. The B Height Finder is pictured in the following illustration.



1.05 Before using the B Height Finder measure the perpendicular distance between the scale and the brass connecting link of the chain to ascertain that it measures 15 inches.

1.06 It is important that the finder be held as close to 15 inches from the eye as possible. The tail of the chain should be held between the index finger and the thumb. The brass connecting link should be held **against** the front of the cheek bone with the index finger.



2. MEASUREMENT OF HEIGHT

2.01 In order to find the height of a pole or the height of attachments on a pole, measure off 60 or 90 feet from the pole and using the appropriate scale, sight along the edge of the height finder lining up the bottom of the pole with the zero line on the scale. Then without moving the zero line from the bottom of the pole take a reading on the top of the pole or attachment.

2.02 If the bottom of the pole is obscured by shrubbery or undergrowth place a mark on the pole at about eye level. Use this mark as the zero reference point and add the height of the mark to the scale reading.

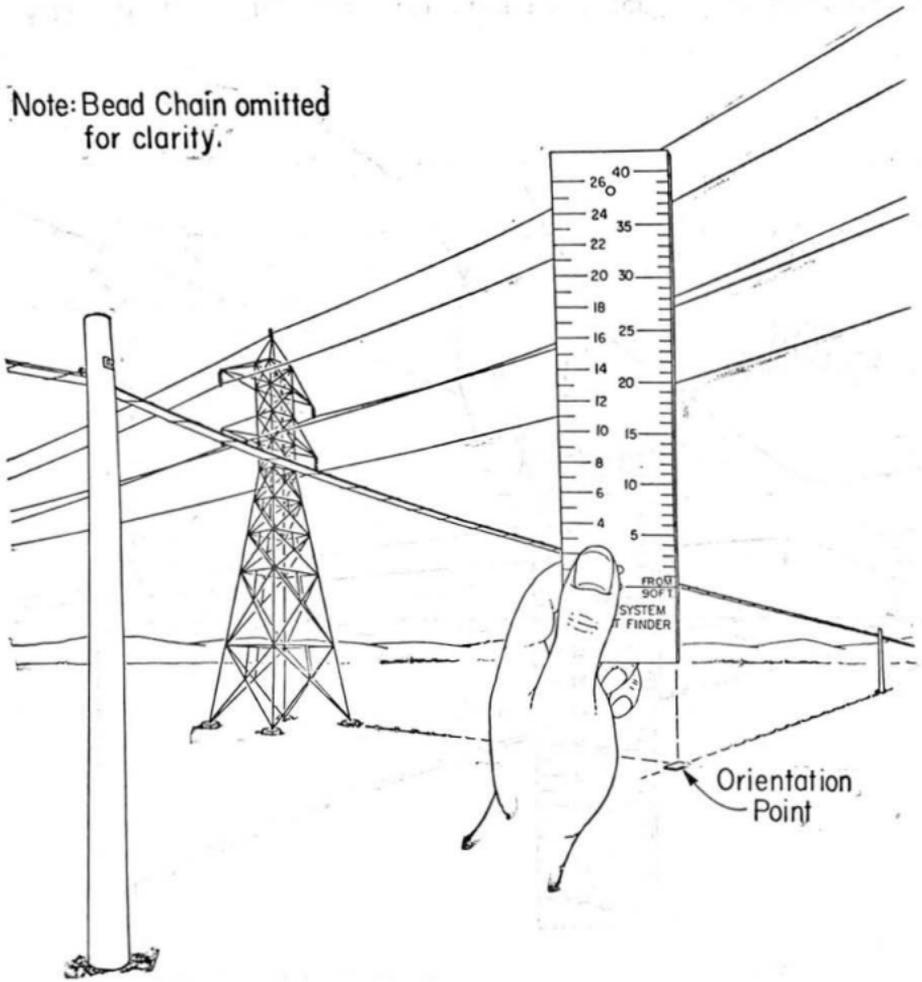
3. MEASUREMENT OF VERTICAL CLEARANCE

3.01 In measuring vertical clearances such as those described in Paragraphs 3.02 and 3.03 where the lower wire or attachment is above eye level, the readings will be more accurate if the 90 foot distance and scale are used.

3.02 To find the clearance between wires or attachments on a pole measure off 90 feet from the pole and using the 90 foot scale sight along the edge of the Height Finder lining up the lower wire or attachment with the zero line on the scale. Then without moving the zero line from the lower wire or attachment take a reading on the top wire or attachment.

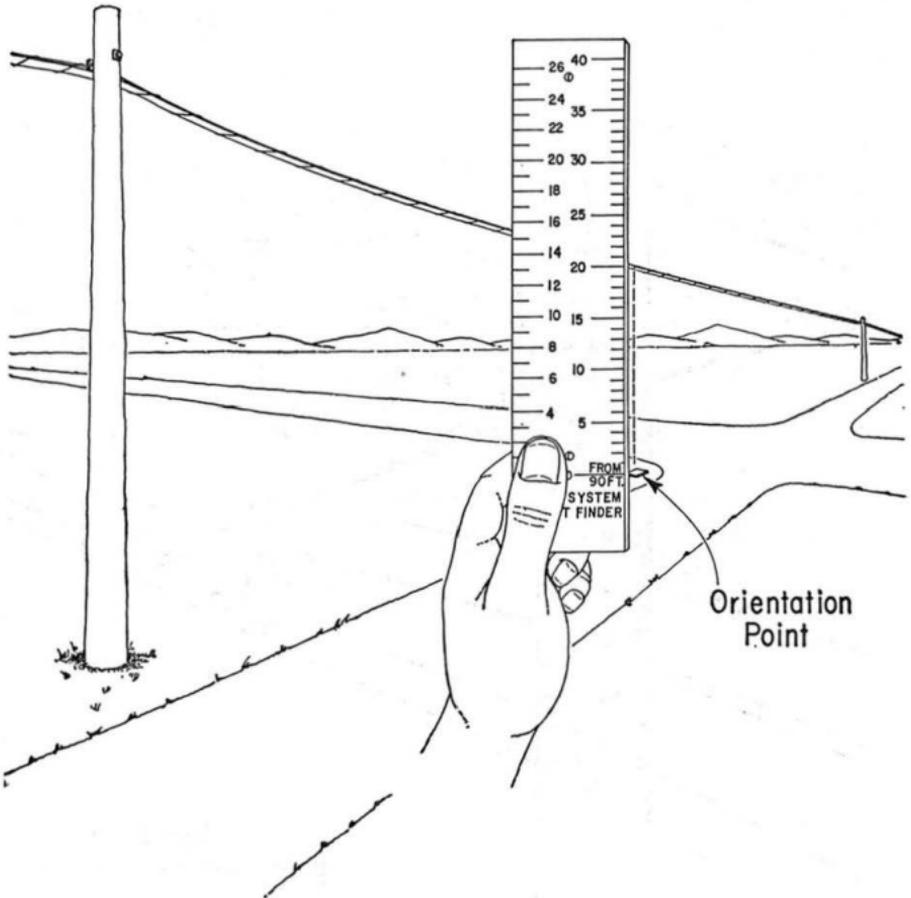
3.03 To measure the vertical clearance between wires in the span, place an object such as a pole stake, with its narrow edge facing the observer, on the ground directly under the point of intersection. Measure off 90 feet from the object under the crossing. Using the object on the ground as an orientation point line up the edge of the Height Finder with this point and take readings. In the illustration the clearance between the telephone cable and the lowest high tension line is 20 feet.

Note: Bead Chain omitted
for clarity.



3.04 To measure wire clearances above the ground in the span it is necessary to use an orientation point directly under the point at which measurements are to be taken as described in Paragraph 3.03. In the illustration the height above the ground is 20 feet.

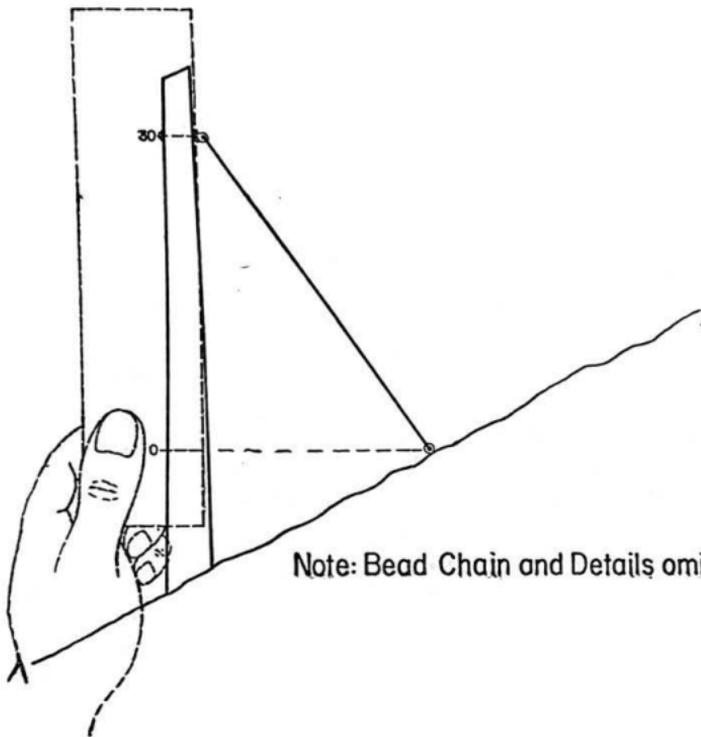
Note: Bead Chain omitted for clarity



3.05 If in taking measurements as described in Paragraphs 3.03 and 3.04, the ground at the orientation point is obscured by shrubbery or undergrowth, a range rod, digging bar or other object of this nature may be used. In making such measurements, the height of the object above ground must be added to the scale reading.

4. OTHER MEASUREMENTS

4.01 In order to find the height of a guy measure off 60 or 90 feet from the pole and using the appropriate scale sight along the edge of the Height Finder lining up the point of intersection of a horizontal line from the anchor to the pole with the zero line on the scale. Then without moving the zero line from the point of intersection take a reading on the guy bolt.



4.02 If it is necessary to make vertical measurements greater than 40 feet, the scales may be multiplied by two providing that the distance from the target to eye is also doubled, for example 180 feet rather than 90 feet.