between the side rails at the base not less than 11½ in for ladders up to and including 10 ft in length. For longer ladders, this width should be increased at least ¼ in for each additional 2 ft of length Other dimensions are given in the code. A wood ladder up to 16 ft long should have side rails 1⅛ x 2¾ in, between 16 and 22 ft, 1¼ x 2¾ in, from 22 to 30 ft, 1¼ x 3 in.

Extension ladders Two-section extension ladders should be no longer than 60 ft The minimum dimensions of the side rails should comply with the American Standard A14 1 Douglas fir or Sitka spruce ladders up to 30 ft should have 1⅝ x 2¾ in side rails, ranging upwards in thickness to 1⅝ x 3 in for Douglas fir side rails up to 44 ft. and 1⅝ x 4 in for Eastern or Sitka spruce up to 60 ft.

Stepladders should never be more than 20 ft long. Stepladders are manufactured in three groups as follows

Type I —4 to 20 ft (heavy duty)

Type II —4 to 12 ft (medium duty)

Type III —3 to 6 ft (light duty)

Trolley and side-rolling ladders should be no more than 20 ft long The width between side rails should be at least 12 in, with the minimum dimensions for side rails 25/32 in. by 3 in. for ladders up to and including 10 ft., and 25/32 in. by 3¼ in. for ladders over 10 through 20 ft when constructed of spruce or equivalent

Trestle ladders and extension or base sections of extension trestle ladders should be no more than 20 ft long. The minimum dimensions for side rails of trestle ladders or for the bases of extension trestle ladders are 1⅝ x 2¾ in. up to 16 ft and 1⅝ x 3 in from 16 to 20 ft. The extension section should have parallel side rails with minimum dimensions of 1⅝ x 2¾ in up to 12 ft, 1⅝ x 2¾ in. up to 16 ft, and 1⅝ x 2¾ in. up to 20 ft

Fixed ladders should be installed between 75 and 90 degrees with the horizontal. The distance between the center line of rungs, cleats, or steps and the nearest permanent object in back of the ladder should be not less than 7 in The distance between rungs or cleats should not exceed 12 in and should be uniform throughout the length of the ladder. Rungs should have a minimum diameter of ¾ in. for metal ladders and 1⅛ in. for wood ladders

Fixed ladders should have parallel sides of either wood or metal and should be permanently fastened at top, bottom, and intermediate locations.

A fixed ladder 20 ft or more in length should be provided with a cage or basket guard

The ladder cage should extend from a point 7 ft from the base to the top of the ladder with the bottom of the cage flared 4 in and the inside clear of projections A ladder cage should extend not less than 27 in or more than 28 in from the center line of the rungs of the ladder and should be not less than 27 in wide

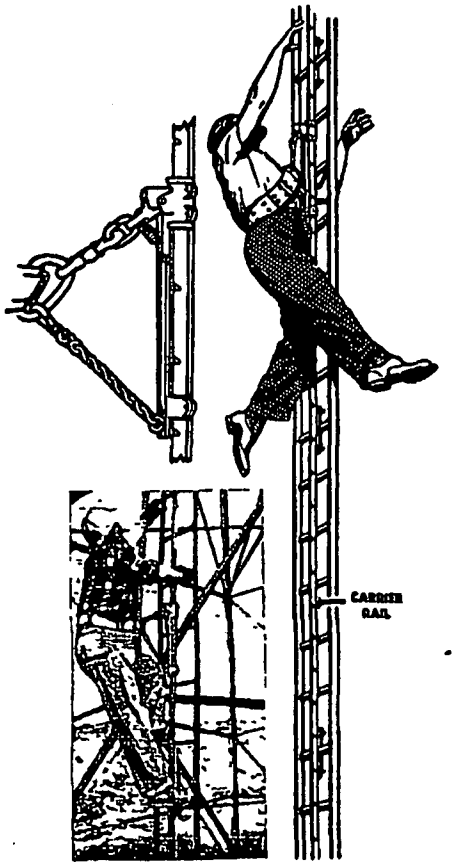


Fig. 15-9. Fixed ladder safety device.
Courtesy Safety Tower Ladder Company