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POLE REST ATTACHMENTS FOR LADDERS

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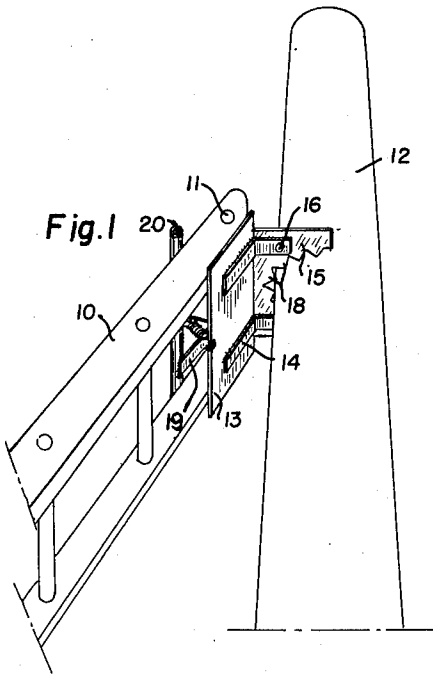


Fig. 1

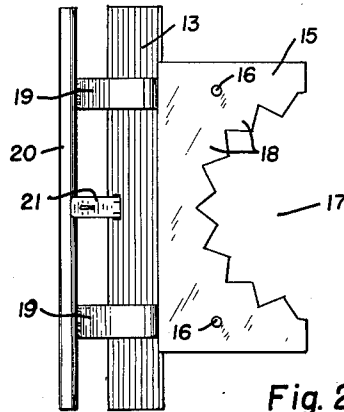


Fig. 2

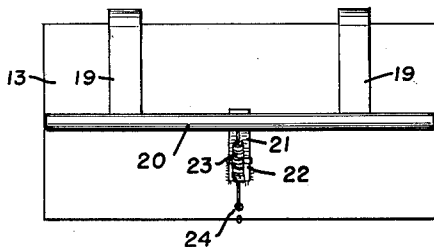


Fig. 3

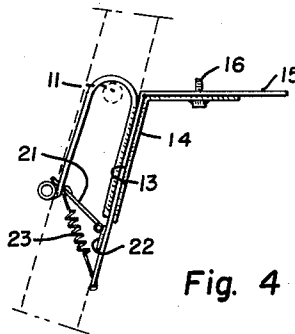


Fig. 4

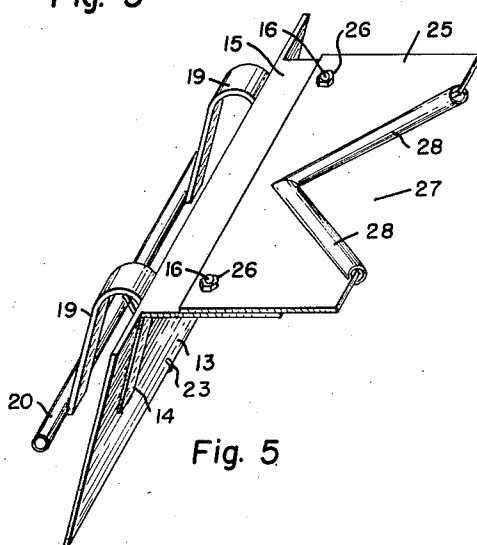


Fig. 5

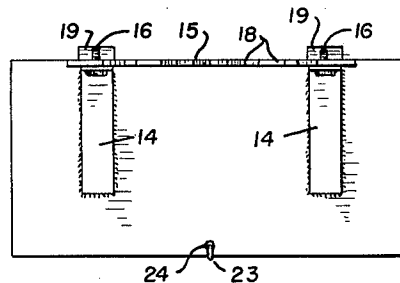


Fig. 6

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1

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POLE REST ATTACHMENTS FOR LADDERS

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1 Claim. (Cl. 228—60)

This invention relates to a safety device for ladders, and has for its principal object the provision of a ladder attachment which will securely support the ladder against a narrow vertical structure, such as a telephone or power pole, the corner of a building, or other narrow support from which the ladder might tilt or slide while in use.

Another object of the invention is to so construct the device that it can be quickly and easily applied to or removed from the ladder without the use of tools.

A further object is to provide a device of this character which will be light in weight and easily portable, and economical to manufacture and use.

Other objects and advantages reside in the detail construction of the invention, which is designed for simplicity, economy, and efficiency. These will become more apparent from the following description.

In the following detailed description of the invention, reference is had to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the description.

In the drawing:

Fig. 1 is a fragmentary, perspective view looking upwardly and illustrating the improved ladder safety device as it would appear in use on a pole;

Fig. 2 is a plan view of the improved device arranged for use against a pole or the like;

Fig. 3 is a front view thereof;

Fig. 4 is a side view thereof;

Fig. 5 is a perspective view of the improved safety device for ladders arranged for engaging a rectangular structure, such as the corner of a building or the like; and

Fig. 6 is a rear view of the improved device.

In the drawing the rails of a conventional ladder are illustrated at 10 and the uppermost rung of the ladder at 11. A pole, such as a telephone or power pole, is indicated at 12.

The improved safety device comprises a relatively flat ladder plate 13 to which two inverted, L-shaped bracket members 14 are welded or otherwise secured. The bracket members 14 extend upwardly on the rear of the plate 13, thence rearwardly therefrom at an obtuse angle. A pole plate 15 is secured on the rearwardly extending portions of the bracket members 14 by means of upwardly projecting, threaded studs 16, or in any other desired manner.

The ladder plate 13 is preferably rectangular in shape and has a width to exceed the width of the widest expected ladder 10. The pole plate has an arcuate indentation 17 formed therein. The edge of the arcuate indentation 17 is preferably serrated to provide a plurality of relatively sharp, pointed teeth 18.

Two hooked bars 19 are welded or otherwise secured to the forward face of the ladder plate 13. These bars have an inverted U-shape and extend upwardly, forwardly and downwardly in substantially parallel relation to the ladder plate 13. The two free extremities of the

2

bars 19 are braced from each other by means of a cross tube 20 secured to both bars 19 and having a width substantially equal to the length of the ladder plate 13.

A swingable latch tongue 21 extends from a hinge 22 secured to the forward face of the ladder plate. A tension spring 23 constantly pulls the free extremity of the latch tongue 21 against the cross tube 20. The tension spring 23 is hooked at its upper extremity through a receiving perforation in the latch tongue 21, and at its lower extremity through a similar perforation 24 adjacent the lower edge of the ladder plate 13.

To apply the device to the ladder 10, it is forced downwardly over the upper extremity of the latter with the cross tube 20 engaging the forward faces of the rails of the ladder and the ladder plate 13 lying flat against the rear faces of the ladder rails. As it moves downwardly, the upper rung 11 of the ladder will force the latch tongue 21 upwardly until the latch moves below the rung, at which time the spring 23 will snap the latch to the locked position of Fig. 4 so as to prevent withdrawal of the device from the ladder. The ladder is then inclined against the pole 12, the latter entering the indentation 17 and being engaged by the teeth 18, as shown in Fig. 1, which act to firmly hold and brace the ladder against the pole so that it cannot tilt sidewardly thereon.

For use on rectangular uprights, such as square poles, building corners, etc., a plate, which will be herein designated as a corner plate 25, is employed. The corner plate is perforated to receive the upstanding threaded studs 16 so that it may be secured on the top of the pole plate 15 by means of suitable nuts 26. The corner plate is provided with a triangular indentation 27, the two sides of which are preferably positioned at right angles to each other. The latter two sides are covered by means of a split rubber tube to provide edge cushion members 28.

It can be seen that if the ladder is to be used against rectangular corner structures, the corner plate 25 is simply attached on the pole plate 15 by means of the nuts 26 and the ladder is placed against the corner structure, the latter entering the indentation 27. It can be seen that the ladder is securely prevented from tilting sidewardly on the corner of the structure.

The improved safety device can be quickly and easily removed from the ladder by simply depressing the latch tongue 21 against the action of the spring 23 so that the latch member can pass the upper rung 11.

It will be noted that the cross tube 20 bears against the upper or forward faces of the ladder rails 10 to prevent the ladder plate 13 from swinging away from the lower or rear faces thereof.

While a specific form of the improvement has been described and illustrated herein, it is to be understood that the same may be varied, within the scope of the appended claim, without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired secured by Letters Patent is:

A safety device for attachment to ladders of the type having two side rails joined by rungs, comprising: a relatively flat rectangular ladder plate engageable with the lower edges of the rails adjacent the upper ends thereof in an operative elevated position of the ladder, a second plate formed to engage a pole or other object disposed in angular relation to said ladder plate and rigidly secured thereto, a pair of U-shaped brackets having corresponding legs thereof secured to said ladder plate and the bight portion thereof being disposed substantially in the plane of said second plate, the bight portions of said brackets receiving the uppermost rung of the ladder in the operative position of the device with the legs thereof disposed between the side rails, an elongated member of a length greater than the distance between the side rails secured to

the free ends of the other legs of the brackets and adapted to engage the upper edges of the side rails, a latch tongue disposed intermediate said brackets and having one end thereof secured to said ladder plate, the opposite free end of said latch tongue adapted to engage the upper side of said elongated member, and spring means normally holding said latch tongue in engagement with said elongated member.

5

362,768
1,063,121
1,553,279
2,432,189
2,518,107

228,404

References Cited in the file of this patent

10

UNITED STATES PATENTS

271,509 Nolton ----- Jan. 30, 1883

Mead ----- May 10, 1887
Danforth ----- May 27, 1913
Wirth ----- Sept. 8, 1925
Bucher et al. ----- Dec. 9, 1947
Wilson ----- Aug. 8, 1950

FOREIGN PATENTS

Germany ----- Nov. 10, 1910