Feb. 7, 1950 H. F. HUSTED 2,496,539

LADDER FOOT

Filed Aug. 21, 1947

Fig. 1.

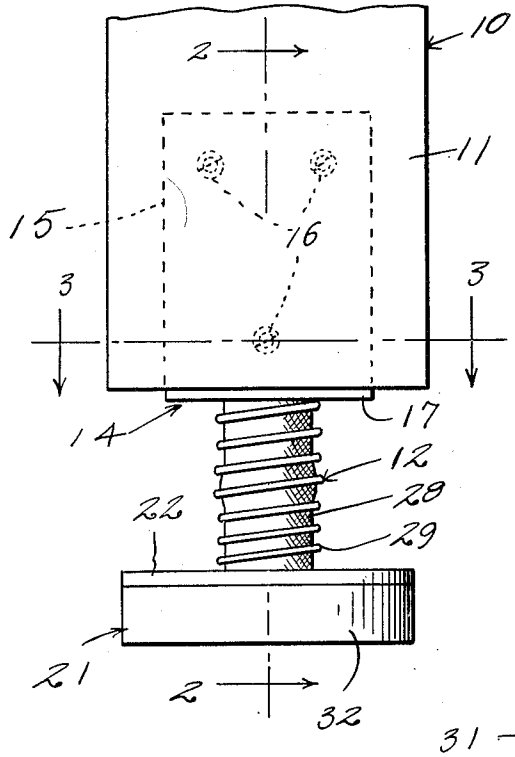


Fig. 2.

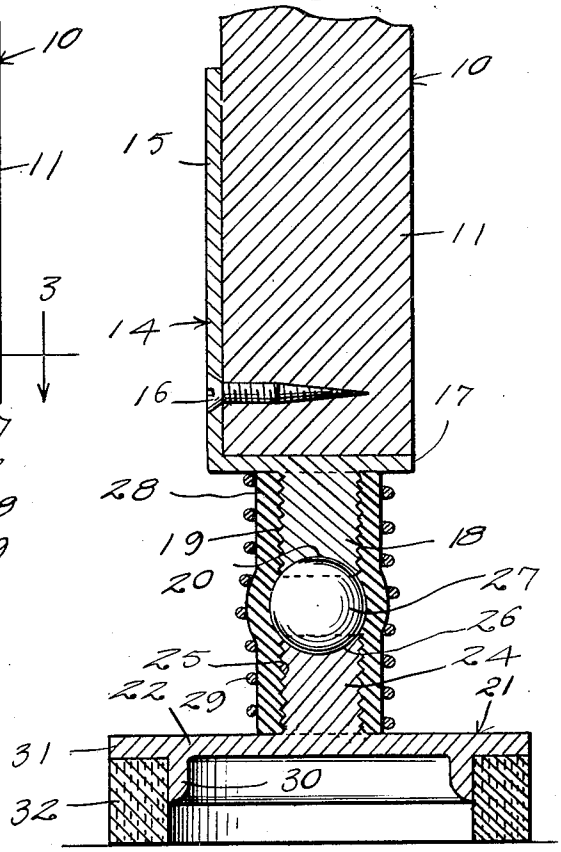
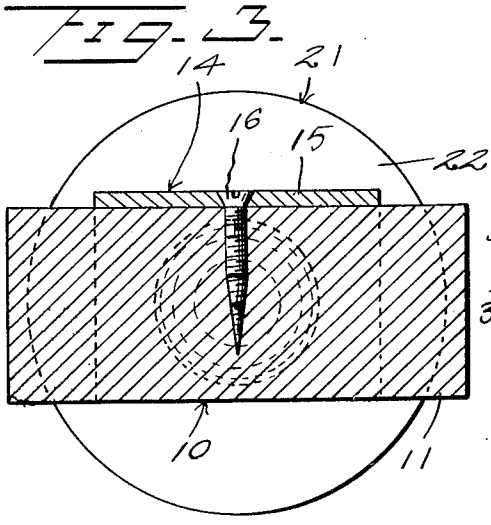


Fig. 3.



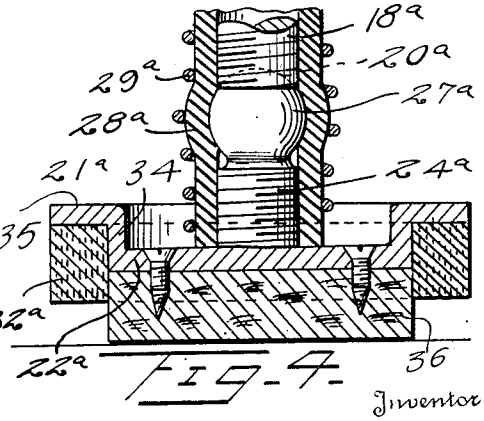


Fig. 4.

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LADDER FOOT

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2 Claims. (Cl. 228—61)

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This invention relates to an improved ladder foot.

It is an object of this invention to provide an improved ladder foot for supporting the lower end of a ladder on the ground where the surface on which the ladder is supported is inclined at an angle and not suitable for the normal location of the lower end of the ladder.

Another object of this invention is to provide an improved ladder foot of the kind to be more particularly described hereinafter, in which the ladder supporting foot may be pivoted substantially universally at the lower end of the ladder for supporting the ladder on an inclined surface.

Still another object of this invention is to provide an improved ladder foot of this kind in which the ground engaging portion of the foot is rockably supported on the lower end of the ladder by a ball and socket connection contained within a resilient housing so that the housing may cover the ball and socket joint in all positions of the ground engaging member.

A further object of this invention is to provide an improved ladder foot which is formed of a minimum number of parts to provide a highly efficient connection between the universally supported ground engaging member and the lower end of the ladder.

A still further object of this invention is to provide a friction surface on the lower end of the ladder foot so that the ladder may be securely supported on what would normally be a smooth surface.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawings and specifications, and then more particularly pointed out in the appended claims.

In the drawing,

Figure 1 is a front elevation of a ladder foot constructed according to an embodiment of my invention,

Figure 2 is a vertical section taken on the line 2—2 of Figure 1,

Figure 3 is a horizontal section taken on the line 3—3 of Figure 1,

Figure 4 is a fragmentary vertical section of a modified form of this invention.

Referring to the drawing, the numeral 10 designates generally a ladder having a side member 11 on which the improved ladder foot 12 is adapted to be secured. An L-shaped plate or bracket 14 is fixed to the lower end of the side member 11 of the ladder 10 and the ladder foot 12 is supported on the ladder from the bracket 14.

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The vertical arm 15 of the bracket 14 is adapted to overlie a portion of the member 11 on one side thereof. The bracket 14 is secured on the ladder 10 by bolts 16 or other suitable fastening devices. The horizontal arm 17 of the bracket 14 is adapted to abuttingly engage the lower end of the member 11. A downwardly extending cylindrical lug 18 is fixed to or formed on the lower arm 17 and depends therefrom. The lug 18 is threaded exteriorly as indicated by the numeral 19. The lower end of the lug 18 is formed with an arcuate concave recess 20. A ground engaging member 21 is pivotally connected with the lug 18 by means of a ball and socket joint. The ground engaging member 21 is formed of an annular plate 22 having a centrally disposed upwardly extending lug 24.

The lug 24 is formed with threads 25 exteriorly thereof and is formed with a concave recess 26 on the upper end thereof. A ball 27 is adapted to be disposed between the lugs 24 and 18 and engages within the recesses 20 and 26. For securing the ball 27 in position I have provided a resilient housing for the lugs 24 and 18, and ball 27. The housing 28 is formed of a short length of flexible resilient tubing. The tubing 28 is threadably engaged about the lug 18 at one end thereof.

The ball 27 is disposed within the recess 20 inside of the housing 28 and the lug 24 is threadably engaged in the other end of the tube 28 for securing the ball 27 therein. As the tubing 28 is quite resilient I have provided a stiffening means for the housing which consists of a coiled wire 29 threadably disposed exteriorly of the housing 28. The coiled wire or reinforcing member 29 extends along the entire length of the rubber tube or housing 28.

The ground engaging member 21 is formed with an annular flange 30 on the lower side thereof spaced inwardly from the outer edges or periphery 31. A rubber friction ring 32 is carried by the ground engaging member 21 on the lower surface thereof and the inner periphery of the ring 32 engages the outer edge or surface of the flange 30. The upper end of the ring 32 is engaged with the lower surface of the plate 22 outwardly of the flange 30.

The resilient ring 32 may be vulcanized to the member 21 or otherwise suitably attached. The ring 32 is made of rubber to provide a positive friction surface for the foot 12 and other suitable soft material may be used.

In Figure 4 there is shown a modified form of this invention in which the ball 27a is fixed on one

of the lugs as 24*a*. The ball 27*a* is rotatably engaged in the recess 20*a* of the lug 18*a* and a rubber or resilient tubular housing 28*a* encloses the ball and lugs. Also in Figure 4 there is shown a modified form of ground engaging member 21*a* having an annular plate 22*a* with an upwardly extending flange 34 about the periphery thereof. A horizontally extending flange 35 extends outwardly from the upper end of the flange 34 and a rubber ring 32*a* engages about the flange 34, below the flange 35.

Additional bearing surface may be provided by securing on the lower side of the central portion of the plate 22*a* an annular rubber plug 36. The plug 36 or ground engaging portion of the member 21*a* may depend below the lower edge of the ring 32*a* to provide a greater friction surface on which the ladder is supported. A coil of wire as 29*a* is provided about the housing 28*a* for reinforcing the housing about the ball 27*a* and threaded lugs 18*a* and 24*a*.

I do not mean to confine myself to the exact details of construction herein disclosed, but claim all variations falling within the purview of the appended claims.

Having thus described my invention, what I claim is:

1. An improved ladder foot comprising a resilient tubular member, a spherical member in said tubular member intermediate the length thereof, oppositely disposed supporting lugs in said tubular member, means securing one of said lugs to the bottom of a ladder, each of said lugs engaging said spherical member in said tubular housing, and a ground engaging member carried by the other of said lugs.

2. An improved ladder foot comprising a rubber tube, a coiled spring about said tube for reinforcement thereof, a lug engaging in one end of said tube, means securing said lug to the ladder, a lug engaging through the other end of said tube, a ground engaging foot carried by said latter lug, and a ball in said tube engaging the inner ends of said lugs whereby said ground engaging foot may be disposed at an obtuse angle while supporting said ladder.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,314,193	Hipwood	Aug. 26, 1919
1,651,863	Baur	Dec. 6, 1927