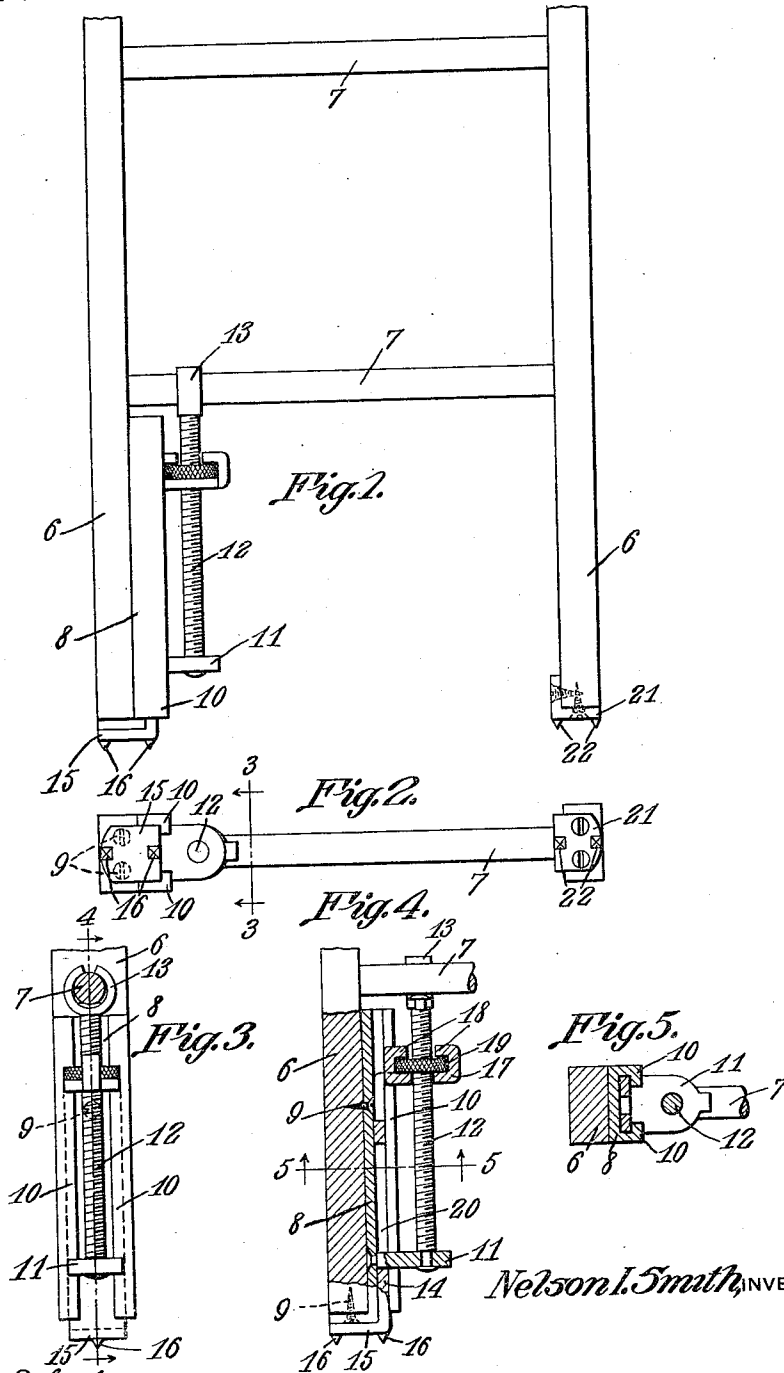


N. I. SMITH.
LADDER ATTACHMENT.
APPLICATION FILED SEPT. 15, 1916.

1,272,551.

Patented July 16, 1918.



WITNESSES

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LADDER ATTACHMENT.

1,272,551.

Specification of Letters Patent.

Patented July 16, 1918.

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To all whom it may concern:

Be it known that I, NELSON I. SMITH, a citizen of the United States, residing at Winsted, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Ladder Attachments, of which the following is a specification.

This invention relates to attachments for ladders, and the like, and aims primarily to provide a mechanism of improved construction for application to the side rails of a ladder for lengthening the same should it be desired to use the ladder upon an uneven surface.

A further object of the invention is to provide a device of this character having improved means for adjusting the leg the required distance. A still further object of the invention is to provide a ladder attachment of the character set forth which is equipped with improved means for preventing slipping of the ladder, which embodies means for maintaining the extensible leg positively in its various positions of adjustment, which may be readily attached to and detached from the ladder, which is composed of but few simple, inexpensive and readily assembled parts, and which will prove thoroughly practical and efficient in operation.

With these objects in view, together with others which will appear as the description proceeds, the invention resides in the novel formation, combination and arrangement of parts, all as will be described more fully hereinafter, illustrated in the drawings, and particularly pointed out in the claims.

In the drawings:—

Figure 1 is an elevation of the lower portion of a ladder and illustrating the application of the attachment constructed in accordance with the invention;

Fig. 2 is a bottom plan view of the device shown in Fig. 1;

Fig. 3 is a sectional view taken upon line 3—3 of Fig. 2;

Fig. 4 is a sectional view taken upon line 4—4 of Fig. 3;

Fig. 5 is a detail transverse section taken upon line 5—5 of Fig. 4.

In carrying out the invention, use is made of a suitable base which is applied to one of the legs or side rails of a step ladder and adjacent the end thereof, and within which is slidably arranged a leg. This leg carries

a foot at one end affording a suitable tread surface to engage with the ground and to support the weight of the ladder. A threaded shank is carried by the base and extends loosely through a platform projecting laterally from the leg, the said shank being also detachably secured to the lowermost rung of the ladder. A nut or bur is retained upon the platform of the leg and is threadedly engaged with the shank so that rotary movement of the nut will adjust the leg upon the base, depending upon the direction of rotation of the nut.

Referring now particularly to the drawings, 6 represents the leg of a conventional form of step ladder, and 7 the rungs therefor. A base 8 is secured as by screws 9 to the inner face of one of the side rails 6 adjacent the end thereof, the said base being of substantially the same width as the said rail. The outermost extremity of the base extends at right angles as shown to engage over the end of the ladder rail. This base is formed of suitable metal, and has its longitudinal edges struck upwardly and inwardly as shown to provide guide rails 10.

An ear or support 11 is secured, by rivets or bolts, to the base 8 adjacent the lower end thereof, and projects at right angles to the said base between the guide rails 10. Secured adjacent the outer end of the ear or support 11 and projecting upwardly therefrom is a threaded shank or stem 12, the said shank being disposed parallel to the base 8, and has secured to its upper end a malleable plate or clip member to be engaged around the rung of the ladder to maintain the shank rigid in proper position.

Arranged for sliding movement within the guide way formed between the spaced guide rails 10 is a leg 14, the latter being constructed of an elongated plate bent angularly at its lower end to form a foot 15. This foot is provided with downwardly projecting teeth or cleats 16 for engagement with the ground to prevent slipping of the ladder. The plate 14 is of a width to fit snugly within the guide ways so as not to oscillate therein, and is bent outwardly at its uppermost end to provide a platform 17, through which the threaded shank or stem 12 loosely projects. This platform has its edges struck upwardly and bent inwardly to provide retaining members 18, the latter confining a rotatable bur or screw member 19 threadedly engaged with the shank 12,

The plate constituting the leg 14 is provided with an elongated centrally arranged slot 20, through which the inner end of the ear or support 11 passes, so that the leg is free to slide within the guide way.

Secured to the bottom end of the opposite ladder rail 6 is a wear plate 21, having in its lower surface detents or cleats 22 for engagement in the ground to assist in preventing the ladder from slipping when in use.

From the foregoing, it is obvious that I have provided an extremely simple adjustable leg for attachment to ladder rails or the like. When it is desired to use the ladder upon uneven supporting surfaces, the screw member or bur 19 is rotated in such direction as will extend or retract the adjustable leg 14, accordingly as the same is moved. The device is constructed in such manner as to be capable of quick attachment to and detachment from the ladder rail when required. The clip or plate 13 at the upper end of the shank 12 holds the said shank rigid and permits of the device being adjustably maintained upon the ladder. In the foregoing, I have described the invention as being associated with the side rails of a ladder, but it will be understood, of course, that the same may be equally as well applied to stanchions, scaffolding, or the like.

While the present is an illustration of the preferred embodiment of the invention, it is obvious that minor changes in the details of construction and arrangement of parts may be resorted to if desired, without de-

parting from the spirit of the invention or exceeding the scope of the claims, and the right to make such variation in construction is hereby reserved.

What is claimed is:—

1. In a device of the class described, a base, a leg slidably mounted upon said base, a screw shank fixedly secured to said base and arranged in spaced parallel relation therewith, a screw member carried by said leg and engaged with the threads of said shank and a clip carried at the free end of said shank.

2. In a device of the class described, a leg slidably arranged upon a ladder rail, a screw member rotatably mounted upon said leg, a threaded shank for engagement through said screw member, and means for securing said shank to a rung of said ladder.

3. In a device of the class described, a base having a guide way and adapted to be secured to the ladder rail, a leg slidably mounted in said guide way, a foot at one end of said leg, a platform fixed to said leg, a rotatable screw member on said platform, a threaded shank fixed at one end to said base and projecting through said platform and screw member, and a malleable clip at the free end of said screw member adapted to be engaged with the rung of said ladder.

In testimony whereof I affix my signature in presence of two witnesses.

NELSON I. SMITH.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."