Sept. 18, 1951 M. F. CHEEK 2,567,989

LADDER LEG EXTENSION

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Fig. 1.

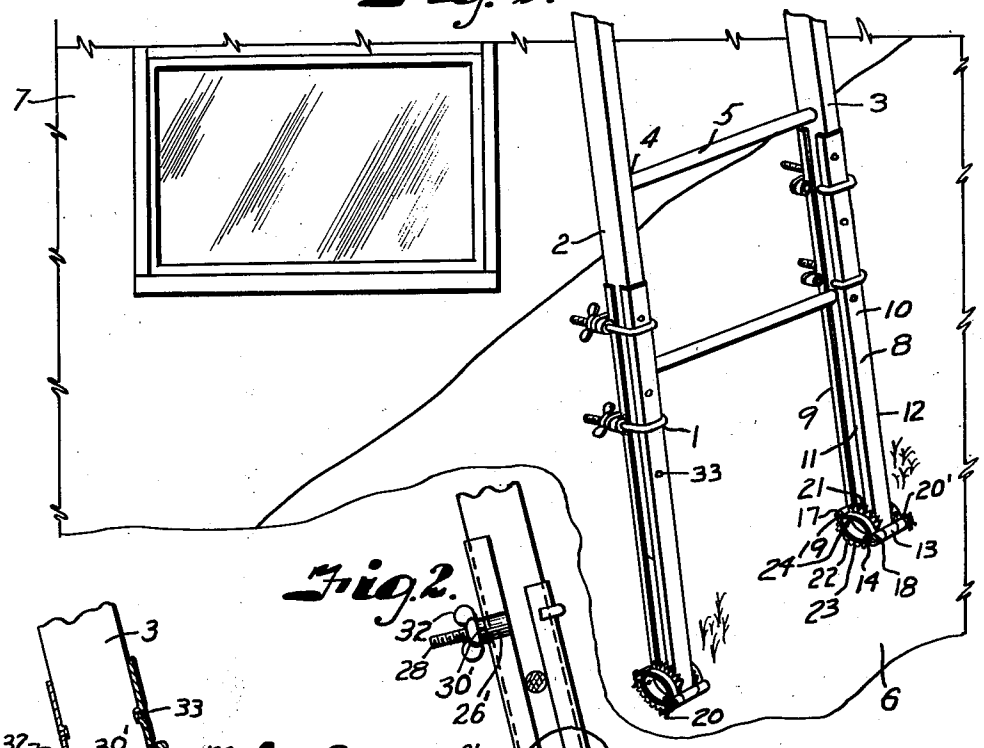


Fig. 2.

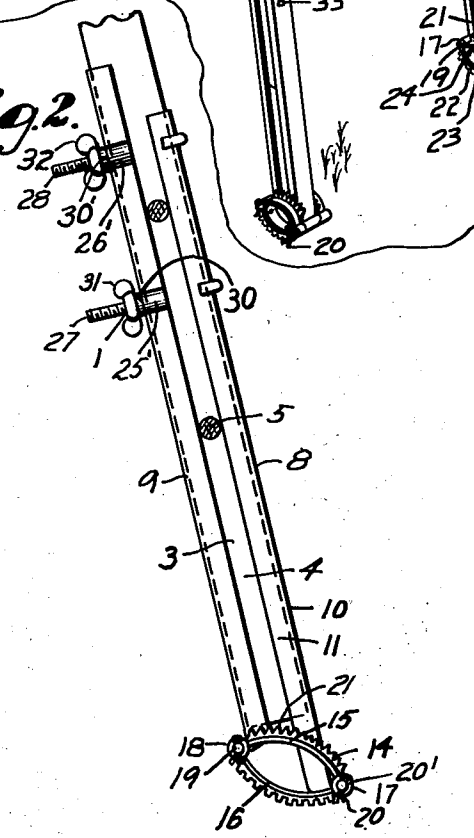
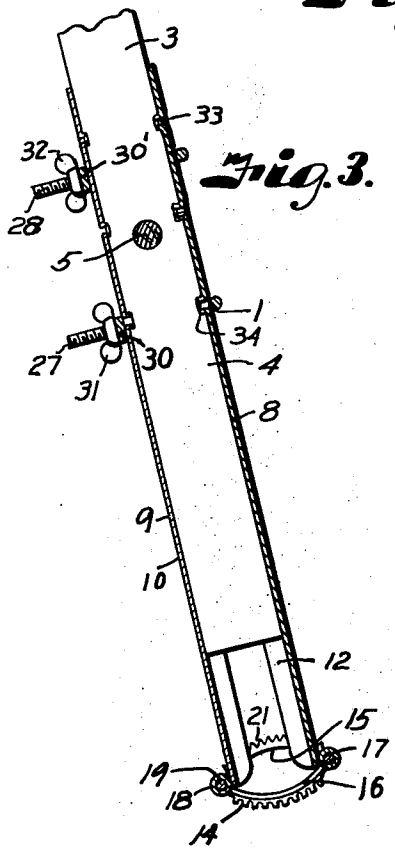


Fig. 3.



Inventor

Millard F. Cheek

By Fishburn & Mullendore,

Attorneys.

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Fig. 4.

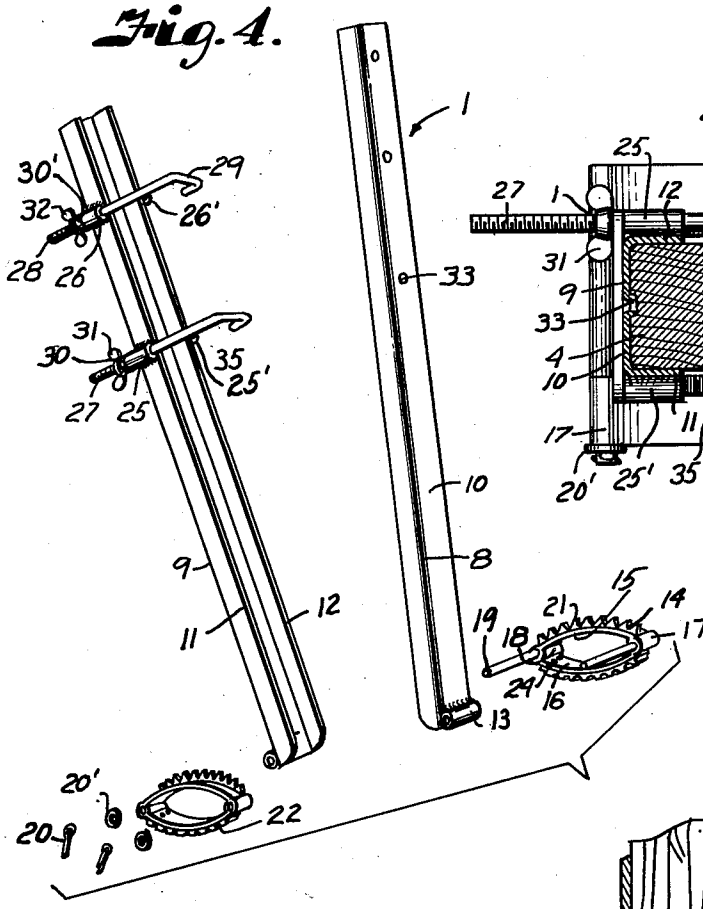


Fig. 5.

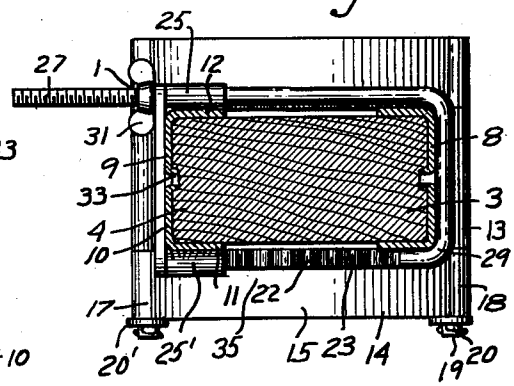


Fig. 6.

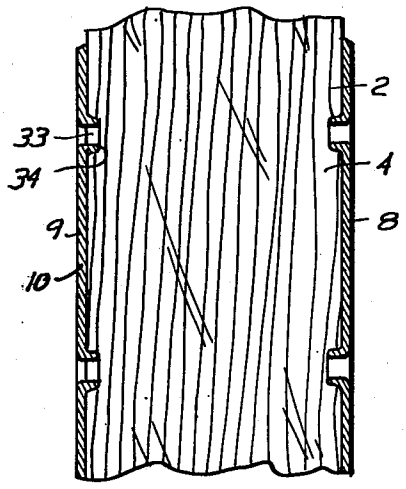
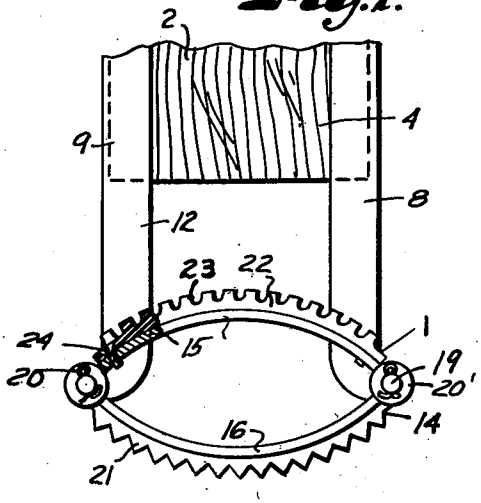


Fig. 7.



Inventor

Millard F Cheek

By Fishburn & Mullendore.

Attorneys.

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LADDER LEG EXTENSION

Millard F. Cheek, Liberty, Mo., assignor to V. W. Cheek, Liberty, Mo.

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3 Claims. (Cl. 228—63)

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This invention relates to a ladder leg extension, and more particularly to an extension to be attached to the lower end of the legs or stiles of a ladder for lengthening one of said stiles when used on an uneven surface.

The principal object of the present invention is to provide a ladder leg extension which is adjustable to fit any size of leg of a ladder.

Other objects of the invention are to provide a ladder leg extension adapted to be applied to the leg of a ladder without boring of holes in the leg, which holes would tend to weaken the leg; to provide a ladder leg extension which is quickly and easily applied to and removed from the leg of a ladder; to provide a ladder leg extension which may be adjusted to the desired length of the unevenness to accommodate or adjust the ladder to the unevenness of the surface upon which the ladder is placed; to provide means on the ladder leg extension to prevent slipping of the extension on the leg of the ladder; and to provide a device of this character, simple, economical to manufacture and efficient in operation.

In accomplishing these and other objects of the present invention, I have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of the invention of ladder leg extension shown applied to the legs of a ladder.

Fig. 2 is a side view of one of the extensions showing the adjustability to fit a small leg of a ladder.

Fig. 3 is a vertical sectional view through the extension showing the adjustability to fit a larger size leg of a ladder.

Fig. 4 is a perspective view of the ladder leg extension with the parts shown in disassembled relation.

Fig. 5 is a transverse cross sectional view showing the extension applied to a leg of a ladder.

Fig. 6 is a vertical section particularly illustrating the bosses in the channel members for engaging the leg to prevent slipping thereof.

Fig. 7 is an elevational view partly in cross section to illustrate the non-skid member attached to the base of the extension.

Referring more in detail to the drawings:

1 designates a ladder leg extension embodying the features of my invention adapted to be attached to the legs or stiles 2 and 3 of a ladder 4 having the usual rounds 5. Oftentimes it is necessary to use a ladder on uneven surfaces, such as the surface of the ground or the like 6, or on

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sidewalks, where, in use of ordinary ladders, the ladder will not stand in a straight position against a building or the like 7. In such instances use of an extension to one of the stiles of a ladder is practical, and in many instances necessary.

While I have here shown a ladder leg extension applied to both stiles of a ladder, only one extension may be used if desired. As the extensions are identical, only one will be described.

8 and 9 designate side rails comprising channel members having transverse back portions 10 and side flanges 11 and 12. The channel members are adapted to face each other. Bearings 13 are provided on the lower ends of the transverse or back portions of the channel members 8 and 9. These bearings comprise short pieces of tubing welded or otherwise rigidly secured to the ends of the channel members.

Foot or base members 14 are pivotally mounted on the lower ends of the channel members 8 and 9 as best illustrated in Fig. 1. The base members are formed in two pieces, each consisting of pieces of strap iron or the like 15 and 16 having their respective ends welded to bearings 17 and 18. These bearings and strap iron may be cast in one piece if desired, and the straps are curved to form a substantially oval-shaped member. One member is placed on one side of the channel members and the other member on the other side as illustrated in Fig. 1. The foot members are pivotally mounted to the bearings of the channel members by bolts or pins 19, the pins being held in place by cotter pins or the like 20. Washers 20' are provided on the pins if desired.

One of the strap iron members is provided with a row of teeth 21 which may be welded to the strap member or cast therein as desired. The opposite strap member is provided with a non-skid strip of material, such as rubber or the like, 22 having a tread 23, the non-skid material being secured to the strap member by rivets or the like 24.

Welded or otherwise suitably secured to the side flanges of the channel member 9 are bearings or guide members 25—26 and 25'—26'. The guides are spaced longitudinally from each other. The shanks 27 and 28 of fastening members having hooks 29 and 29' engage in the guide members on one side of the channel members to clamp the channel members on the legs of a ladder. I preferably place the shanks of the fastening devices on the outside of the channel members so that they may slide up or down on the stiles without interference with the rounds 5. The guide members are provided on both

sides of the channel member so as to adapt the extension for use on either leg of the ladder. I also weld or otherwise rigidly secure strap members 30 and 30' to the back of the channel member 9 which is also secured by welding or the like to the guide members 25—26 and 25'—26' to form a more rigid structure, the strap members 30 and 30' being provided with openings through which the shanks 27 and 28 of the fastening devices extend. The shanks of the fastening devices are provided with threads adapted to receive thumb nuts 31 and 32 as best illustrated in Figs. 2 and 3 to tighten the hooks on the channel members and hold them at any desired position on the stiles of the ladder. The transverse portions 10 of the channel members are provided with a plurality of punched-out portions 33 having bosses 34 adapted to engage the sides of the stiles to prevent slipping of the channel members thereon.

The respective pieces of the base members 14 are removable from the channel members by disengaging the cotter pins and reversing the position of the pieces thereof so that the teeth may be used in ice or snow to prevent slipping or the non-skid side of the device used on pavement, sidewalks or the like as desired.

Operation of a device constructed and assembled as described is as follows:

In applying an extension to the stiles of a ladder, the thumb nuts 31 and 32 may be loosened sufficiently to allow disengagement of the hooks 29 from the channel members and one channel member placed on one side of the stile and the other channel member on the opposite side and the extension adjusted to the desired height as required by the unevenness of the surface upon which the ladder is to be placed. By moving the channel members 8 and 9 longitudinally with respect to each other on the foot or base members as shown in Fig. 2, the channel members may be adjusted to and from each other to fit stiles of different width, and then placing of the hook members over the channel members and tightening of the thumb nuts will hold the extension rigidly on the stiles.

It will be noted that the guide members shown in Fig. 4 are placed on the inside of the stiles of a ladder so that the shanks of the fastening devices will be out of the way to prevent catching of the clothing of the user of the ladder and the ends of the shank portions are facing under the ladder. When the fastening devices are placed on the outside it is also desirable to place the threaded end of the shank to the underneath side of the ladder.

It will be obvious from the foregoing that I have provided an improved ladder leg extension which is adjustable to fit different size stiles of ladders and which may be quickly and easily applied to such stiles and removed therefrom.

What I claim and desire to secure by Letters Patent is:

1. A ladder leg extension comprising, facing channel members adapted to engage a ladder leg, bearings on the lower ends of said channel members, foot members adapted to engage the respective sides of said channel members, said foot members comprising spaced straps having bearings at their respective ends, means pivotally connecting the bearings on said foot members to the respective bearings on the channel members to permit relative movement of the channel members, and means for fastening said channel members to said ladder leg whereby said foot members are held in angular position relative to the ladder when in use.

2. A ladder leg extension comprising, facing channel members adapted to engage a ladder leg, bearings on the lower end of said channel members, foot members adapted to engage the respective sides of said channel members, said foot members comprising spaced straps having bearings at their respective ends, means pivotally connecting the bearings on said foot members to the respective bearings on said channel members to permit relative movement of the channel members to said ladder leg, means for fastening one of said channel members to said ladder leg at a different elevation than the other channel member, whereby said foot members are held in angular position relative to the ladder leg when in use, said foot members being reversible and having teeth on one side and non-skid material on the other.

3. A ladder leg extension comprising, facing channel members adapted to engage a ladder leg, bearings on the lower end of said channel members, foot members adapted to engage the respective sides of said channel members, said foot members comprising spaced straps having bearings at their respective ends, means pivotally connecting the bearings on said foot members to the respective bearings on said channel members, and means for fastening one of said channel members to said ladder leg at a different elevation than the other channel member, whereby one channel member may be moved longitudinally with respect to the other to position one end of said foot members at a higher elevation than the other end, said fastening means including hook members carried by one channel member and adapted to engage the other channel member to clamp said members to the ladder leg.

MILLARD F. CHEEK.

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