

T. CONNORS.
LADDER.
APPLICATION FILED FEB. 21, 1910.

987,960.

Patented Mar. 28, 1911.

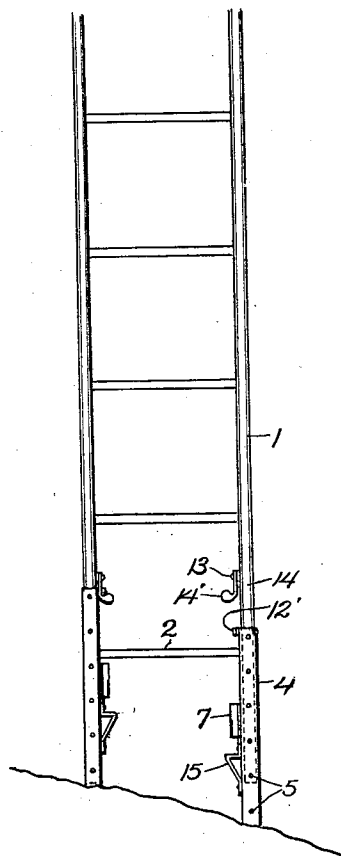


FIG. I.

FIG. III.

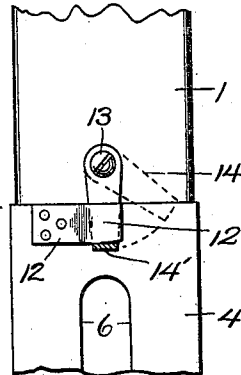
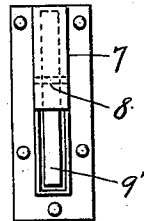


FIG. IV.

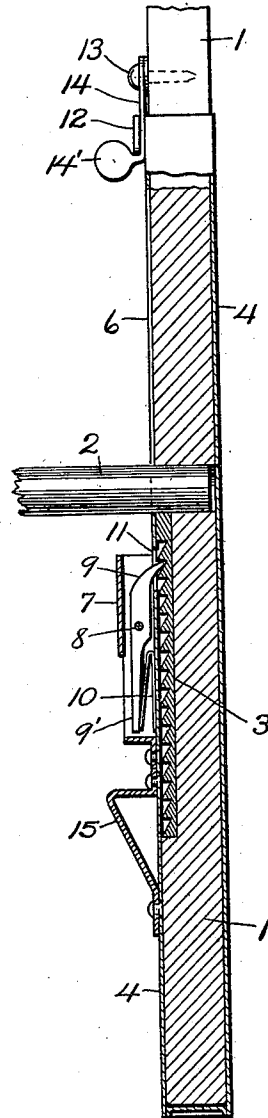


FIG. II.

WITNESSES:

Myrtle M. Jackson
A. M. Carboden

INVENTOR,

Thomas Connors,

BY

Arthur C. Brown
ATTORNEY.

UNITED STATES PATENT OFFICE.

THOMAS CONNORS, OF KANSAS CITY, MISSOURI.

LADDER.

987,960.

Specification of Letters Patent. Patented Mar. 28, 1911.

Application filed February 21, 1910. Serial No. 545,166.

To all whom it may concern:

Be it known that I, THOMAS CONNORS, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Ladders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to ladders, and has for its principal object to provide a ladder which may be firmly supported upon uneven or sloping ground, without leaning to the right or left.

A further object is to provide the improved details of construction, hereinafter described and illustrated in the accompanying drawings, in which:

Figure I is a front elevation of a ladder provided with improvements according to or embodying my invention. Fig. II is an enlarged longitudinal section of the construction shown in Fig. I. Fig. III is a detail view in elevation of the pawl housing. Fig. IV is a detail view looking in the direction of arrow *a* on Fig. II, the hook being in section to expose the engaged member.

Referring more in detail to the parts:—

1 designates the legs of the ladder, which may be of any usual form and material. Just below the bottom ring 2, a ratchet rack 3 is let into the inner face of each leg 1, so that the points of the teeth are flush with the leg surface. Said teeth are directed downwardly. Fitted slidably upon the lower portion of each leg 1 is a metallic sleeve 4, composed of a piece of sheet metal, the same being lapped upon itself and secured with rivets 5. Said sleeves are adapted to form leg extensions for the ladder when moved downwardly upon the legs 1. These sleeves may be applied to the lower ends of the ladder legs, in any suitable manner, either before the various parts of the ladder have been assembled or to ladders already assembled and in use. In the latter case the lower rung of the ladder is displaced to permit the application of the sleeves after which the rung is passed through slots 6 and replaced in position. A slot 6 is cut through the inner side of

each sleeve, the lowermost rung 2 passing therethrough, so the rung does not interfere with the downward movement of the sleeves.

Riveted to the inner face of each sleeve 4 is a pawl housing 7, preferably formed of sheet metal, and provided with a pin 8 on which is pivoted the pawl 9 which is held in yieldable engagement with the ratchet rack 3 by a spring 10 acting upon the pawl arm 9'. A slot 11 is cut through the sleeve 4 so that the pawl may project therethrough.

A sheet metal bracket 12 is secured to the upper part of each sleeve, said bracket having an outstanding part 12'. Pivoted on a screw 13 on the leg 1 is a hook 14, which is adapted to engage the bracket 12 and is provided with a thumb-piece 14'. The function of these parts is to hold the extensions or sleeves in raised position when the ladder is not in use, or when it is resting upon a level support.

A foot bracket 15 is secured to the inner side of each sleeve 4 below the housing 7.

Supposing that the ladder is to be set up on sloping ground or other uneven support, the user disengages the hooks 14 from brackets 12 and places the bottom of the ladder in the desired position, holding the ladder vertically. At this time only one of the sleeves 4 will touch the supporting surface. The user places a foot upon the bracket 15 of the other sleeve 4 and depresses same until the bottom thereof is in firm contact with the support. During this motion the pawl 9 slips over the ratchet teeth 3. When weight is put upon the ladder the lowered leg extension 4 will sustain its half of the weight, and the ladder will be supported without leaning to right or left.

An opening 17 is made in the housing 7, to give access to the pawl arm 9'. To restore the leg extension to closed position, the user presses the pawl-arm inwardly, thereby disengaging the pawl from the rack, then slides the part 4 upwardly to the limit of its movement.

It is obvious that the details of construction may be modified without sacrificing any of the advantages thereof.

Having thus described my invention, what I claim as new therein and desire to secure by Letters-Patent is:—

1. An extension foot for ladders comprising a hollow sleeve provided with a closed

elongated slot in the inner wall thereof, whereby said sleeve may be adjusted past the rungs of a ladder, a pawl housing positioned below and in line with said slot, a
 5 pawl pivotally mounted in said housing with its end in position to project through a slot in the bottom of the housing, and a toothed bar set into the inner face of the ladder leg and adapted to be engaged by said pawl
 10 substantially as set forth.

2. An extension foot for ladders comprising a hollow sleeve provided with a closed elongated slot in the inner wall thereof, whereby said sleeve may be adjusted past
 15 the rungs of a ladder, a pawl housing positioned below and in line with said slot, a

pawl pivotally mounted in said housing with its end in position to project through a slot in the bottom of the housing, a foot bracket secured to said sleeve, a toothed bar
 20 set into the inner face of the ladder leg, a keeper secured to the upper end of the sleeve and a pivoted latch constructed to engage said keeper and adapted to be secured to
 25 the ladder.

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

THOMAS CONNORS.

Witnesses:

MYRTLE M. JACKSON,
 ARTHUR C. BROWN.

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