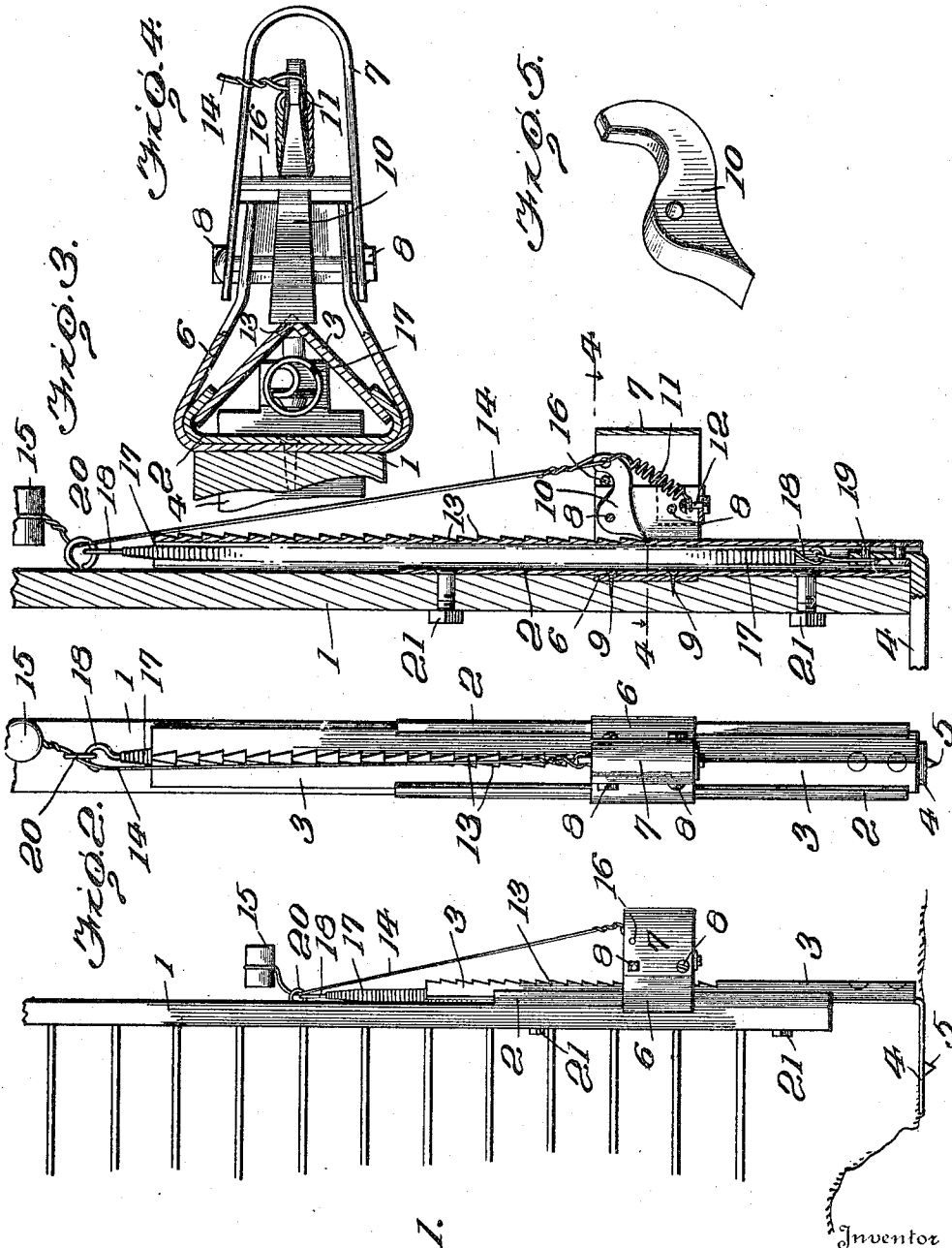


C. A. BRYANT.
EXTENSION FOOT FOR STEP LADDERS.
APPLICATION FILED NOV. 15, 1916.

1,229,218.

Patented June 12, 1917.



Witness
Hoyd R. Cornwall.

Fig. 1.

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CARROL A. BRYANT, OF LIVERMORE, MAINE.

EXTENSION-FOOT FOR STEP-LADDERS.

1,229,218.

Specification of Letters Patent.

Patented June 12, 1917.

Application filed November 15, 1916. Serial No. 131,439.

To all whom it may concern:

Be it known that I, CARROL A. BRYANT, a citizen of the United States, residing at Livermore, county of Androscoggin, and State of Maine, have invented certain new and useful Improvements in Extension-Feet for Step-Ladders, of which the following is a specification.

This invention relates to that general class of devices known as extension feet for stepladders whose purpose is to lengthen the ladder at the point where it needs lengthening.

My object is to provide an extension foot of improved construction which is self-contained and complete so that it may be attached to the lower end of the leg of any stepladder without necessitating reconstruction of the ladder or requiring the device to be built into the ladder at the time the latter is manufactured. My improved extension foot may be quickly and easily applied by any one to any stepladder by the use of bolts or other fastenings. According to circumstances one, or both, of the legs of the ladder may be equipped with the present invention.

In my invention there is a guideway which is adapted to be bolted or fastened to the leg of the ladder. Slidable in the guideway is the leg of an extension foot. A coil spring of suitable length and strength, connects the leg or foot to the leg of the stepladder. Ratchet teeth are provided on the extension leg. A boxing or housing which is secured to the guideway, straddles the adjustable or extension leg. Pivoted in the boxing or housing is a locking dog which is actuated by a spring, contained within the housing, whereby the dog is adapted to engage the teeth on the extension leg. A suitable stop limits the retraction of the dog. For retracting the dog there may be provided a wire connected thereto which may run through an eye on the leg of the stepladder to which the main spring is anchored. Any suitable operating handle or pull device is employed, at a position convenient to the user when standing on the ground, so that the dog may be released from the extension leg if it is desired to shorten the extension leg. To extend the leg, the operator simply presses upon the foot piece of the leg, against the tension of the retracting spring thereof and thereupon the dog will lock the leg in any position it may assume.

My invention is self-contained and complete and adapted for attachment, as such, to the leg of a stepladder. The invention is applicable to any carpenter's, painter's, farmer's, householder's, or other stepladder.

The foot may be provided with a barb or steel point or points to prevent it from slipping on a smooth surface.

Modifications may be resorted to in carrying out the invention and the disclosure hereinafter given is to be considered as illustrative, rather than restrictive, of the scope of the invention.

In the accompanying drawings:

Figure 1 is a view showing the invention applied to a leg of an ordinary stepladder;

Fig. 2, a detail front elevation of the complete device;

Fig. 3, a detail longitudinal section;

Fig. 4, a cross section through the housing on line 4-4, Fig. 3, and

Fig. 5, a detail of the locking dog.

The legs of an ordinary stepladder are shown at 1. My invention comprises a guide-way 2, a leg 3, preferably of angle iron whose edges are slidable in the guide 2; a foot 4 which may be provided with a point or barb 5, if desired, a clip 6 which straddles the guide-way, is surmounted by a housing 7 to which it is secured by fastenings 8. Fastenings 9 connect the clip to the guide-way. A dog 10, pivoted on one of the fastenings 8, is actuated by a coil spring 11 fastened by an adjustable bolt at 12 so that said dog is normally pressed against the extension leg and is adapted to engage with any one of the teeth 13 thereof. The spring 11 may be tightened by bolt 12. Any suitable wire or pulling device 14 is connected to the dog and may be provided with a handle 15 suitably located so that it may be readily grasped by a person when in standing position. A pin 16 serves as a stop to limit the movement of the dog when the latter is being released. A coil spring 17 which is provided with hooks 18 at its respective ends, lies within the angle iron extension leg and is housed thereby and interposed between it and the guide-way. One of the hooks of the spring is connected to the leg or to the foot, as at 19. The other hook is anchored with any suitable fastening, for instance, an eye 20 which may be screwed into the leg 1. The eye 20 may serve as a guide for the wire 14.

The guide-way 2 is secured to the leg 1 by bolts or any suitable fastening devices 21.

To apply the invention to a stepladder, it is only necessary to secure the guide-way 2 to the leg 1 and to fasten the upper end of the spring to the leg by an eye or other suitable device. The extension foot may be provided on one, or on both, of the legs of the ladder.

To extend the device for the purpose of leveling the ladder, the operator presses upon the foot piece 4 with his foot, in opposition to the tension of the retracting spring 17. The dog automatically locks the leg in any position it assumes. To retract the leg and foot, the handle 15 is pulled, releasing the dog, whereupon the spring 17 draws the leg and foot upwardly.

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

1. In an extension foot for stepladders, the combination with a guideway having flanges, of a leg, angular in cross-sectional shape, whose longitudinal edges engage the flanges and slide thereagainst, provided with teeth or the like in its angle or ridge, a housing or the like, permanently connected to the guideway and carried thereby, and a spring-actuated releasable dog mounted in, and protected by, the housing and engageable with the teeth aforesaid.

2. In an extension foot for stepladders, the combination with a guideway, of a leg, angular in cross-sectional shape, slidable therein, provided with exterior teeth or the like in its angle or ridge, there being a hollow space between the leg and guideway, a housing or the like, attached to and form-

ing a part of the guideway and straddling the angular slidable leg, a spring actuated releasable dog mounted in, and protected by, the housing and engageable with the teeth aforesaid, and a contractile coil spring lying in the space between the leg and the guideway and connected to the leg, said spring being housed by the leg and adapted for retracting the leg.

3. In an extension foot for stepladders, the combination with a guideway, of a cross sectionally arched extension leg slidably related thereto, releasable means for locking the leg in different positions in relation to the guideway, and a contractile coil spring lying inside the leg and located between it and the guideway, said spring being connected to the leg.

4. In an extension foot for stepladders, the combination with a guide-way, of an extension leg, angular in cross-sectional shape, having its longitudinal edges slidably related to the guideway, there being a hollow space between the leg and the guideway, and releasable means for securing the leg in different positions.

5. In an extension foot for stepladders, the combination with a guide-way, of an extension leg, angular in cross-sectional shape having its longitudinal edge slidably engaged with the guideway, there being a hollow space between the leg and the guideway, a coil spring extending longitudinally of the leg and guide-way between them and connected to said leg, and releasable locking means for the leg.

In testimony whereof, I hereunto affix my signature.

CARROL A. BRYANT.

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