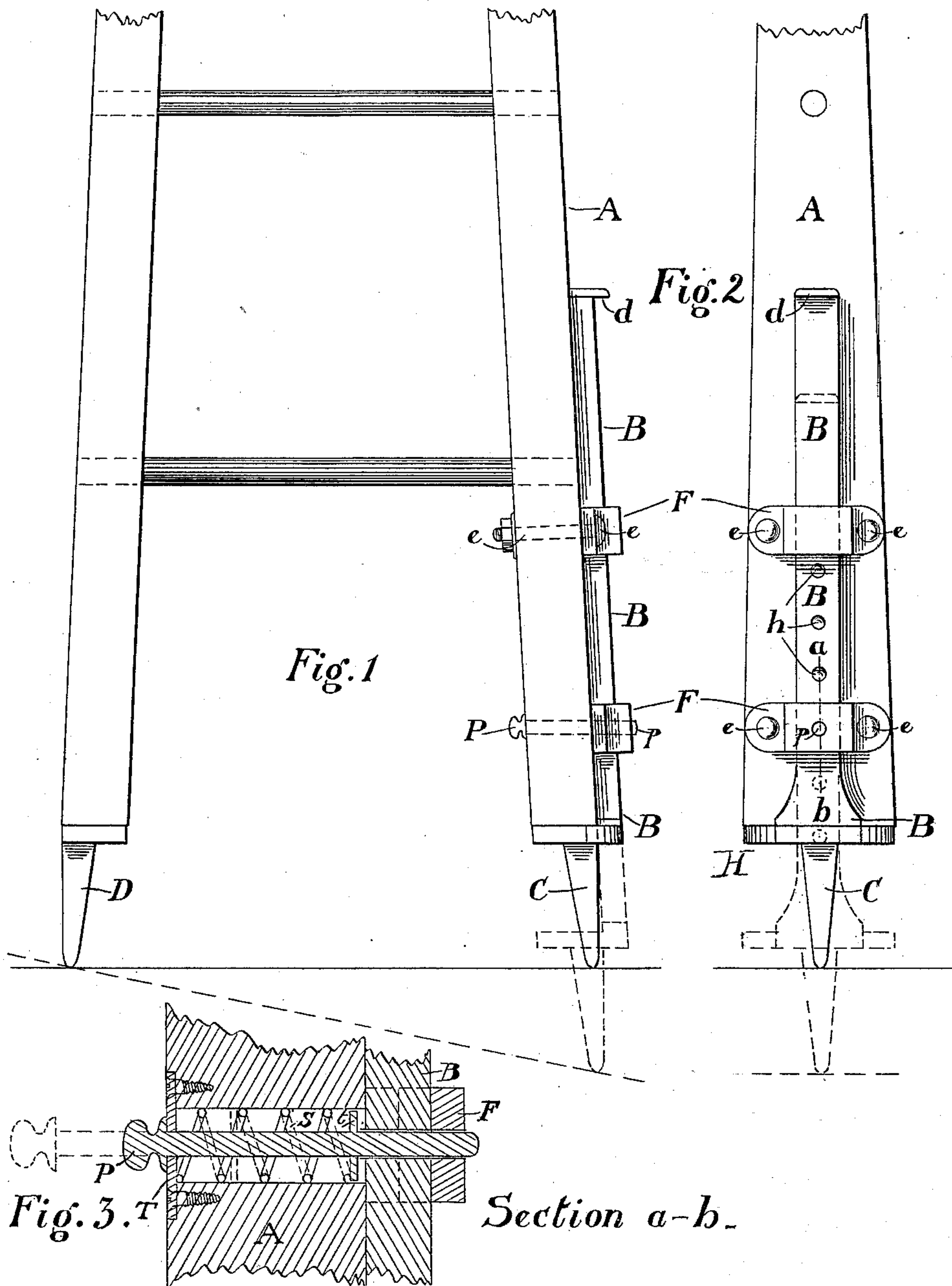


(No Model.)

W. G. SICKLES.
LADDER.

No. 409,711.

Patented Aug. 27, 1889.



Witnesses:
Seymour A. Harris.
John N. Mayer.

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UNITED STATES PATENT OFFICE.

WILLIAM G. SICKLES, OF STUYVESANT, NEW YORK.

LADDER.

SPECIFICATION forming part of Letters Patent No. 409,711, dated August 27, 1889.

Application filed March 29, 1889. Serial No. 305,279. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. SICKLES, a citizen of the United States, residing at Stuyvesant, in the county of Columbia and State of New York, have invented a new and useful Extension-Foot for Ladders, of which the following is a specification.

My invention relates to improvements in ladders; and the object of my invention is to produce a ladder provided with an adjustable extension-foot that will enable it to maintain a vertical position when used on a sloping surface. I accomplish this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 shows a ladder provided with my invention. Fig. 2 is a detail view of my adjustable extension-foot. Fig. 3 is a section along the line *a b* on Fig. 2.

When it is necessary to erect a ladder on a side hill, it is usual to place blocks under one side piece thereof, in order that it may be caused to maintain an upright position, and these blocks are very liable to become displaced, causing the overthrow of the ladder and consequent injury to the one on it. By the use of my invention this danger and inconvenience is obviated.

To one of the side pieces A of the ladder I attach the extension-bar B by means of the straps F F, the bar B moving freely up and down between the side of the ladder and the said straps.

At the end of the bar B, I place a presser-foot provided with a plate H, extending at right angles to the bar B, under and flush with the opposite side of the side piece A of the ladder, to which the bar B is attached. To said plate H is attached a spur C, smaller than the plate H, the plate H extending outwardly from the spur on all sides, thus limiting the passage of the spur into the ground. This is a very necessary part of my invention, and its importance is especially noticed when the ladder is used by fruit-pickers. When the ladder is to be used on a horizontal surface, the foot of the extension-bar B and the foot of the opposite side piece are in the same horizontal plane, as shown in full lines in Fig. 1. To securely hold the side bar B in the po-

sition in which it is placed, I arrange a bolt or pin P in the side piece A, which extends through the holes *h h* in the extension-bar B into the strap F.

Around the bolt P, I place a coil-spring S, which is in contact with a flange *t* on the bolt near the middle of the bolt, and also in contact with the plate T, set into the side piece A of the ladder, in contact with which the head of the bolt presses. When the bolt P is withdrawn from the bar B, the spring S becomes compressed, and when it is released the resiliency of the spring will cause the bolt to enter one of the holes *h* when it comes opposite the end of the bolt. A pin may be used without the spring attachment, or a different arrangement for operating the bolt may be supplied without materially altering my invention.

When it is desired to raise a ladder supplied with my invention on a sloping surface, as shown by dotted lines in Fig. 1, I draw out the extension-bar B sufficiently to make the ladder-rounds level, and the bolt P is allowed to pass into the extension-bar, holding it securely in place.

The operation of my ladder-extension foot is extremely simple. The device is inexpensive. It performs its functions in a positive and satisfactory manner.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a ladder, the combination of the extension-bar B, movable in a vertical plane in contact with one of the side pieces of a ladder, said extension-bar provided with a series of holes, a presser-foot attached to said bar B, having an upper horizontal portion H and a lower smaller pointed portion C, with a bolt P, passing through the side piece A of the ladder, engaging with the holes in the bar B, said bolt operated by the spiral spring S, placed about the shank of the bolt and secured within the side piece A, all substantially as described, and for the purpose set forth.

WILLIAM G. SICKLES.

Witnesses:

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